

COMPARING URBAN OCCUPATIONAL STRUCTURES FROM THE
OTTOMAN EMPIRE TO THE TURKISH REPUBLIC WITH IMPERIAL
RUSSIA TO THE USSR

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Comparing Urban Occupational Structures from the Ottoman Empire to
the Turkish Republic with Imperial Russia to the USSR

Osmanlı İmparatorluğu'ndan Türkiye Cumhuriyeti'ne, Rus
İmparatorluğu'ndan SSCB'ye Şehirselleşme Yapıları Üzerine Bir
Karşılaştırma

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Title: Comparing Urban Occupational Structures from the Ottoman Empire to the Turkish Republic with Imperial Russia to the USSR

In this thesis project the alleged association between the industrialization and occupational transformation in late context of late imperial and early Soviet Russia as well as late Ottoman and early Republican Turkey would be examined.

The relevant occupational data for hereby analysis is obtained from; for Ottoman/Turkish side, 1845 Tax Survey records, 1927, 1935 and 1945 General Census records and for Tsarist Russia/Soviet side, 1897 Russian General Census and 1926 Soviet Census.

This analysis would be undertaken for city-level data and the relevant cities are, from the Ottoman/Turkish side, Bursa and Ankara and for Russian/Soviet side, Ivanovo and Ekaterinburg. The main inquiry would be whether industrialization process goes parallel with occupational transformation, which was supposed to move on a uni-linear line; that is, the majority of labor force would move from primary to secondary and secondary to tertiary sector activities by their occupations.

The main motivation would be to explore more on how different industrialization experiences entail different variations of occupational transformation patterns. Both Ottoman/Turkish and Russian/Soviet industrialization cases were thought to be examples of 'belated industrialization' and hence our analysis could provide us wider perspectives on the varieties of industrialization process. In this thesis project, as a tool of analysis, PSTI classifying system would be used in order to establish a common line in order to compare these four different cases. PSTI is a globally acknowledged occupational classifying system for various levels. In this thesis, two levels of analysis, PSTI First and Second Digit would be employed. The results that have been obtained in this thesis would imply remarks for both relevant local contexts and from a wider perspective, the industrialization process and the great divergence literature.

Sosyal Bilimler Enstitüsü'nde Tarih Yüksek Lisans derecesi için

Uygar Karaca tarafından Eylül 2015'te teslim edilen tezin özeti.

Başlık: Osmanlı İmparatorluğu'ndan Türkiye Cumhuriyeti'ne, Rus İmparatorluğu'ndan SSCB'ye Şehirselsel Meslek Yapıları Üzerine Bir Karşılaştırma

İşbu Yüksek Lisans tezinde, endüstriyelleşme ve mesleki dönüşüm arasındaki ilişki, geç Osmanlı İmparatorluğu'dan erken Türkiye Cumhuriyeti yılları ve buna paralel olarak, geç Çarlık Rusya'sından erken SSCB yılları bağlamında incelendi.

Bu incelemede, gerekli meslek verisine ulaşmak için Osmanlı İmparatorluğu-Türkiye Cumhuriyeti tarafından 1845 Temettuat kayıtları, 1927, 1935 ve 1945 Genel Nüfus Sayımı, Çarlık Rusyası-SSCB tarafından 1897 Genel Nüfus Sayımı ile 1926 Genel Nüfus Sayımı kaynak olarak seçildi.

Bu tezde yapılan analiz için kullanılan veri, şehir seviyesi boyutunda ele alındı ve Osmanlı İmparatorluğu-Türkiye Cumhuriyeti tarafından Bursa ve Ankara, Çarlık Rusyası-SSCB tarafından Ivanovo ve Ekaterinburg şehirleri seçildi. Ele alınacak temel mesele, endüstriyelleşme sürecine paralel ilerleyen mesleki dönüşümün, daha evvelden varsayıldığı gibi çalışan nüfusun ağırlıkla mesleki bakımdan birincil ekonomik aktivitelerden ikincil, ikincillerden de üçüncül ekonomik aktiviteler doğrultusunda, tek yönlü bir düz çizgi üzerinde ilerleyip ilerlemediği yönünde bir sorgulamadır.

Bu tezdeki ana amaç, farklı endüstriyelleşme deneyimlerinin farklı türde mesleki dönüşüm modellerine yol açıp açmadığı yönünde yeni bulgulara ulaşmaktır. Hem Osmanlı İmparatorluğu, hem de Çarlık Rusyası, 'geç endüstriyelleşme' fikrinin örnekleri arasında yer almakta olduğundan, yapılacak analizle farklı endüstriyelleşme yollarının daha geniş bir perspektiften anlaşılması yönünde katkı sağlanması amaçlanmaktadır.

Bu tezde, yukarıda bahsedilen dört farklı örnek durumu ortak bir tabanda inceleyebilmenin yolu olarak, PSTI mesleki sınıflandırma sistemi, bir analiz aracı olarak kullanılmıştır. PSTI, meslek yapısı çalışmalarında, meslek kodlama maksadıyla geliştirilmiş ve uluslararası standartlarda kabul görmüş bir kodlama sistemidir. Bu tezde, eldeki verinin özelliklerine uygun olarak ilk ve ikinci seviye meslek kodlaması uygulanmıştır.

Bu tezde elde edilen sonuçlarla, hem yukarıda bahsi geçen ülkelerin genel iktisat tarihi literatürü hem de daha geniş olarak, küresel boyutta 'endüstriyelleşme' ve 'büyük ayrışma' bağlamlarında oluşan literatüre katkı sağlamayı amaçlanmaktadır.

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Introduction

In this thesis project, I would like to examine the presumed association between industrialization and occupational transformation in the contexts of late imperial and early Soviet Russia as well as late Ottoman and early Republican Turkey while maintaining a special focus on shift and trends regarding occupational structure. The main idea is to investigate more on the industrialization paths of two prominent late-industrializing countries, Russia and Turkey. What kind of a transition does the society experience in terms of occupational structure and in what extent, does the patterns that I would obtain as a result of my analysis for these different cases, fits into the ‘mainstream’ industrialization path. By ‘mainstream’; I would mean a stereotypical a way of structural change where the majority of working population would be firstly engaged in agricultural activities and at later stages of the industrialization process, secondary (mainly manufacturing) and finally tertiary activities (like services) would likely to be dominant. ¹

This theory, first put on the paper by William Petty as far as we know, was formed into a neoclassical economic theory form by Colin Clark in the beginning of Second World War. ² Simon Kuznets was the first scholar who gave a test for this hypothesis via data provided by national income accounts in a comparative and widely extensive manner. As well as Simon Kuznets or David Landes, the main assumption that the main driving force behind economic

¹ Yasusada Murata, “Engel’s Law, Petty’s Law, and Agglomeration,” *Journal of Development Economics* 87, no. 1 (2008): 161–77; Colin Clark, *The Conditions of Economic Progress*. (London; New York: Macmillan; St. Martin’s Press, 1957).

² Clark, *The Conditions of Economic Progress*.

development is technological developments and hence, structural change is not possible without full-fledged industrialization; e.g. heavily mechanized, large-scale production units.

While I would be tracking different industrialization directions by analysing occupational transformation, two essential questions would set the tone for this thesis project: First and foremost, the emphasis would be on the conceptual meaning of industrialization and hence the question ‘What is industrialization?’ would be inherently pursued throughout the work. Secondly, which could be reckoned as a methodological implication while looking for a better answer for the first question: ‘How to measure industrialization?’

In order to undertake such a research, I would like to utilize two types of sources: census records and tax surveys. These would be, namely, 1897 All-Russian and 1926 Soviet Union census for the Russian side and 1845 Ottoman tax survey, 1927,1935 and 1945 Ottoman Turkish general census records. The aim is to build a platform of comparison where all these census and survey data become comparable in our quest for tracking occupational changes and hence, the use a relatively fresh method of measuring ‘industrialization’ while tracking occupational change. One methodological tool that I could use to come up with a solid basis of comparison is the PSTI codification system³, which was developed quite recently by the renowned Cambridge economic historian Tony Wrigley. The peculiarity of this codification system is rather than using national income accounts to track for the structural changes that national economies has gone through, PSTI gives us the opportunity to follow a more micro-based, demand-sided and hence, accurate analysis of the relevant economic developments. PSTI tackles both the

³ Originally, it was has been named as PSTI.

reliability problem of official government documents and provides a more comprehensible platform of analysis with various levels like city, regional or provincial.

The main motivation for such an enquiry could be well justified if we consider the latest findings on the industrialization-occupational transformation nexus. Recent revelations of Leigh Shaw-Taylor and Tony Wrigley, on ‘irregular’ relationship between the occupational transformation and the British Industrial Revolution ⁴, opens the way for more research possibilities in the following sense: The validity of Petty’s Law, that is, the orthodox understanding of occupational transformation in connection with industrialisation, where the majority of workforce move from primary sector to manufacturing and lastly, tertiary sector activities, has been put into question. Whether there could be other possibilities, more irregular transitions between the three main sectors of economy, could be a valid question to pursue in these contexts. The aim is to have a more vivid picture on almost a hundred years of economic history of local and global contexts, regarding the four cities and the relevant countries as well as the industrialization problematic itself.

In this thesis project, I have found some partial evidence for the presumed pattern of ‘Petty’s Law’ does not remain valid for each and every state or society. In Ottoman/Turkish case, rather than ‘industrialization’ in the technological sense, economic development was made possible by a fledging urban economy and therefore, a shift from primary sector dominated economy to the tertiary sector directly, regarding the occupational structure, has been noticed. For Russian

⁴ Leigh Shaw-Taylor and E. A. Wrigley, “Occupational Structure and Population Change,” in *The Cambridge Economic History of Modern Britain. Volume 1, Industrialisation, 1700-1860*, ed. Roderick Floud and Paul (Paul A.) Johnson (Cambridge: Cambridge University Press, 2004), 53–86.

case, the robustness of evidence does not seem to be as lucid as the Ottoman case however, we encounter with similar symptoms, that it was not the industrialization via heavy industry with large-scale mechanized production only, what drives economic growth but other factors like enhanced transportation possibilities and urbanization.

Regarding this attempted analysis for all four these cities, I have observed a significant continuity in their economic developments once we look extensively on the transformation of occupational structure. There have been a significant amount of people who had their occupations within secondary and tertiary sector and not primary sector even back in 1845 and this could be a good indicator 'continuity'; the industrialization process does not take place in discrete periods by the initiatives of aggressive state intervention but rather, the progress could be gradual but slightly uninterrupted. In Russian case, for both Ivanovo and Ekaterinburg, it could be easily grasped that the relative weight of the tertiary sector does not diminish from back in mid-19th century and constantly gaining share from the secondary sector despite the economic hardships in terms of big-scale manufacturing activity, war, famine, disease.

In Ottoman case, despite the 'de-industrialization' effect, that is, a turn back to agricultural occupations among the working population could be discernible especially between 1845 and 1926 but nevertheless, it is not so strong. Both in Bursa and in Ankara as well, tertiary sector activities continue to grow in a slow pace; small-scale manufacturing keeps the secondary sector 'alive' despite the stagnation.

The main implication of this result is as follows: The industrialization concept, as a whole, should be reconsidered. Instead of confining ourselves to the concept of industrialization as a purely technical term, we must look for other ways of interpreting the dynamics of tri-partite relationship between industrialization-occupational change and urbanization and widen our understanding of the phenomena. Instead of just concentrating on national boundaries, more detailed level analysis where deeper spatial-temporal concerns should be added to the current methodological box, for instance, the level of analysis should be lowered from national borders to regional clusters and from there, perhaps cities and districts.

The organization of this thesis is as follows. In the first chapter, I would like to provide a general outlook of the industrialization literature with a particular focus on its association with occupational structure. The idea here to show different perspectives on industrialization experience debates; i.e. the argument on British industrial revolution standing as a sole reason for the ‘Great Divergence’ or the question on the validity of ‘take-off’ conditions for industrialization proper. The aim is to show that recently, there have been raised objections on the one-dimensional industrialization perspective since our study here would like to focus on a similar line of objection: occupational structure does not have to follow a similar process everywhere during the industrialization process.

In the second chapter, I would explain my methodology which is consisted of three main pillars: source, tools of analysis and unit of analysis. In the first section, I would give a more detailed account of the sources that we would like to work for this project. These are, Ottoman 1845 tax survey, 1927, 1935 and 1945 Census as well as 1897 all-Russian census and 1926 Soviet census.

I would also provide a detailed explanation of the PSTI classification which I would utilize here, as a tool of analysis, in order to make the relevant source data comparable with each other.

In the third and fourth chapters, I would like to explore more on local contexts individually; first, on the Russian industrialization and the relevant occupational structure association would be in focus. A brief account of the preceding literature on Russian industrialization during 19th century and in the beginning of 20th century, would be provided. Secondly, I would like to share my results obtained from the hereby analysis on two cities, Ivanovo and Ekaterinburg. The analysis could be revealing since it has been generally assumed in the literature that Russian industrialization experience was discrete and based on state initiatives, largely taken during the last ten years of 19th century. We would see that, perhaps it was not the case, at least for Ivanovo and Ekaterinburg contexts.

In the fourth chapter, the tasks that have been undertaken for the Russian case, would be completed for Ottoman/Turkish case. Here, especially deindustrialization notion would be crucial to keep an eye on during our analysis regarding our selected cities, Ankara and Bursa, since Ottoman manufacturing was generally thought to be ‘collapsed’ until the turn of 19th century and could not recover until the state take the reins based on ideological reasons and put the country on the track of industrialization. Again, this type a ‘discrete industrialization’ narrative was not compatible with our results. In fact, Ankara and Bursa showed a significant level of continuity, albeit more subtle than the Russian case, but nevertheless, the gradual progress was to be depicted. One concern would be the high rate of increase regarding the

administrative roles of Ankara which blurs our analysis and disrupts the reliability of our results.

In the conclusion chapter, I would like to bring both these industrialization experiences together and would like to come to a final verdict on the issue of association between the industrialization and occupational transformation, based on our results obtained from qualitative analysis.

Chapter I: Occupational Transformation and Industrialization, Petty's Law Reconsidered

Industrialization and Modern Growth.

In this thesis project, our approach would be more like an economic historian from the standpoint of a social scientist, more than a neo-classical economist who utilizes mathematical modelling for testing readily-made assumptions. Therefore, we would not be focusing on merely national income accounts or the progress of various industries but would like to be put urban development and growth and its role on the transformation of social structure where occupational data would help us. Therefore, we would be safely assuming that our way of problematizing the industrialization phenomena in the first instance is something akin to be more descriptive.

The industrial revolution of Britain and industrialization process that the rest of the world has experienced, without a doubt, has been well examined from both economic history as well as sociological perspective. Regarding the former, it was for no reason that the founding fathers of the social science, Karl Max, Max Weber or Emile Durkheim, devoted their scholarly interest to the industrialization phenomena and social change related with it. The intriguing question haunted the minds of thinkers, echoed with the same old mysterious curiosity: What does drive

the economic growth? For Adam Smith as well as Marx, it was the division of labour; hence specialization and the markets will carry the progress. For Weber, it was more related with a bureaucratic rationalization and therefore, as a result of ‘good management’. For Kuznets or Landes, it was the ‘modern growth’, driven by technological leap and driven by structural transformation. All of these analysis were supply based and for the economic historians like Rostow or Kuznets, it was more likely to be something of a technicality.

Following Colin Clark’s premises on the structural transformation, Simon Kuznets made us quantitative methods which we would call the National Income Methods. Kuznets, came up with a very intriguing set of questions which was quite remarkable once we consider the historical context of the study that has been undertaken, the post-war recuperation period: “What drives economic growth? What were the forces behind the sustainable industrial momentum get unleashed and powerful impulse that gave led to irrevocable social change? How was the making of the modern world? ”⁵

In order to come up with a comprehensible answer, with the helping hand of recently developed computer technologies, ground-breaking improvements within the statistical analysis sphere, flourishing econometrics as well as new historical research opportunities unlocked by the wider accession to historical official documents, he worked on US national income accounts, covering a time span of nearly 200 years, late 18 century and mid-19th century. We should note that he was not the only scholar who was giving a special interest to the industrialization phenomena

⁵Simon Smith Kuznets, “Modern Economic Growth: Findings and Reflections,” *International Journal of Social Economics* 31, no. 4 (2004): 247–58.

with from the point of view of economic history. He refers to an earlier study, undertaken by Phyllis Dean and W.A. Cole, who pursued for a similar type of inquiry, under the British context. These two authors, utilizing the national income techniques like Kuznets, replaced the ‘social tables of Gregory King of 1688’⁶ and hence became the most comprehensible source of reference of British industrialization based on their study of economic development in Britain covering a period from the late 17th century and up until the middle 20th century⁷ up to that date. However, neither this first quantitative sketch of British industrialization history, nor the Kuznets’ exceptional analysis would remain without any objections or revisions.

After some long tenacious explorations, Kuznets came to the conclusion that it was the technological achievements that has made economic growth sustainable. The sustainable industrialization could only be possible with the advent of ‘differential impact of technological innovations’⁸. This was clearly a rejection of an earlier, ‘Smithian growth’ conception, which was giving prominence to the market inclined, product differentiation process; the emphasis was essentially on the concept of division of labour and most of all, the whole process were thought to be in accordance with the ‘spontaneous nature’ of human development. The impetus, which led the industrial revolution and sustainable growth did not come from state or other provocative political or institutional artefacts: the economic growth and development process was led by the forces of nature and hence, the only agent who was dictating its rules ‘the market’ only. Within this framework, geographical factors become much more prominent rather than

⁶ Leigh Shaw-Taylor and E. A. Wrigley, “Available Sources and Earlier Research,” 2, online available, accessed March 6, 2015, <http://www.geog.cam.ac.uk/research/projects/occupations/abstracts/paper26.pdf>.

⁷ Phyllis Deane, *British Economic Growth, 1688-1959: Trends and Structure*, Modern Revivals in Economic and Social History (Aldershot, Hampshire, England: Gregg Revivals; Brookfield, Vt, USA, 1993).

⁸ Simon Smith Kuznets, *Modern Economic Growth: Rate, Structure, and Spread*, Studies in Comparative Economics 7 (New Haven: Yale University Press, 1966).

institutional or political factors, if one would like to make sense of the multi-faceted industrialization processes, the spatial distribution of certain industries, demographics, the extents of urbanization or the regional inequalities. However, while reverting Smithian insight on the phenomena of industrialization, Kuznets did not use an analytical toolkit which would satisfy the spatial-temporal considerations or quests for a more specified regional focus. His tools of analysis, which remained as the benchmark late until seventies, were the ones which were available by the official accounts: aggregate population growth, product per capita and etc.

Without any doubt, while these scaling inventories were providing quantitative power for the analytical framework, they were lacking more qualitative feature. How could the explanatory power of this precious analytical initiative be improved?

Initial Revisions and ‘Great Divergence’ Debate.

Despite the Kuznetsian insight that renders all the industrialization paths that national economies have walked through could be unified under a common denominator or could be depicted out from stylized facts and figures, more historical explorations found evidence against these conclusions. In order not lapse into ‘Eurocentrism’ trap that Kuznets and his followers have fallen, alternative industrialization narratives have been developed. Scholars like Kenneth Pomeranz⁹, Jean-Laurent Rosenthal and R. Bin Wong¹⁰, Gareth Austin¹¹, Osamu Saito¹² and Kaoru Sugihara¹³, gave an attempt to change the whole spectrum towards a less ‘Eurocentric’, alternative conception of industrialization.

In 1973, Thomas Smith published a comparative account of ‘pre-modern growth’ in Japan and the West. According to Smith, both Japan and Western Europe experienced an increase in

⁹ Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy*, Princeton Economic History of the Western World (Princeton, NJ: Princeton University Press, 2000).

¹⁰ Jean-Laurent Rosenthal and Roy Bin Wong, *Before and beyond Divergence: The Politics of Economic Change in China and Europe* (Cambridge, Mass: Harvard University Press, 2011).

¹¹ Gareth Austin, “Labour Intensity and Manufacturing in West Africa, c.1450-c.2000,” in *Labour-Intensive Industrialization in Global History*, ed. Gareth Austin and Kaoru Sugihara, Routledge Explorations in Economic History 59 (Abingdon, Oxon ; New York: Routledge, 2013), chap. 9.

¹² Osamu Saito, “Proto-Industrialization and Labour-Intensive Industrialization: reflections on Smithian Growth and the Role of Skill Intensity,” in *Labour-Intensive Industrialization in Global History*, ed. Gareth Austin and Kaoru Sugihara, Routledge Explorations in Economic History 59 (Abingdon, Oxon ; New York: Routledge, 2013), chap. 4.

¹³ Gareth Austin and Kaoru Sugihara, eds., *Labour-Intensive Industrialization in Global History*, Routledge Explorations in Economic History 59 (Abingdon, Oxon ; New York: Routledge, 2013).

industrial and commercial activity before the age of industrialization and achieved a modest but secular rise in per capita output over the early modern period. ¹⁴

Despite such a parallel in output growth, however, the two regions exhibited a marked contrast with respect to urbanization. Pre-modern growth in the West was accompanied by urban growth, whereas in the latter half of Tokugawa Japan a majority of towns and cities lost population. This must have been a reflection of fundamental differences, argued Smith, in the ways in which output growth was achieved in early modern Japan and Western Europe. In the European towns, foreign trade and population totals all grew, so that the size of its economy expanded, whereas Tokugawa Japan managed to achieve an increase in per capita output with its economy becoming autarkic, population stagnant and urban commerce outplayed by the rural sector. Smith thus called the west European pattern of pre-modern growth ‘urban-oriented’ and the Tokugawa pattern ‘rural-oriented’.

‘The Great Divergence’ debate has been hovering around since the works of Kenneth Pomeranz ¹⁵, who has come up with significant evidence on the relatively similar way of economic conditions and culprits of Smithian growth in both Asian(Lower Yangzhi Region in China) as well as North-Western Europe. This debate has very strong connections with the question about what industrialization really is in terms of economic historian conceptual space. Is that related with only product per capita improvements, sustainable changes in mortality rates or should we include real wages or life standards of people from different parts of the world?

¹⁴ Thomas C. Smith, “Pre-Modern Economic Growth: Japan and the West,” *Past and Present*, 1973, 127–60.

¹⁵ Pomeranz, *The Great Divergence*.

Akira Hayami has developed the ‘industrious revolution’ concept¹⁶; which was, in a nutshell, an ingenious method of suggesting an alternative way of industrial development. On the grounds of his explorations back on the Tokugawa period of Japan, he developed a framework where later industrial workforce was prepared by the virtues they have acquired during this era, basically heavy focusing on labour-productivity within a land-scarce environment. So unlike the ‘West’, Japanese way was rather learning methods on labour-intensification rather than labour-saving. This was again, contradicting the Kuznetsian insight where technological growth would eventually lead industries to move from labour-intensive into a capital-intensive form.

Jan De Vries has taken a different standpoint and unlike Hayami, he suggested a different way of utilizing this concept of ‘industrious revolution’ within the context of European growth paradox. Within this paradox, it has been widely believed that during the late 15th or early 16th centuries up until the 1780s, the product per capita was rising however, there was a strong trend in real wages to decline. He draw attention to the ‘demand-side’ or household consumption patterns and concluded that it was not the supply side considerations that have led this ‘industrious revolution’ but instead it was the changing tastes; the households did no longer prefer to produce the consumption goods that they would like to use for themselves but instead, chose to acquire it via market so they needed wage labour.¹⁷

¹⁶ Akira Hayami, “Keizai Shakai No Seiritsu to Sono Tokushitsu (The Emergence of the Economic Society and Its Characteristics),” in *Atarashii Edo Jidai Shi Zō O Motomete: Sono Shakai Keizai Shi Teki Sekkin*, ed. Shakai Keizaishi Gakkai. [from old catalog (Tōkyō: Tōyō Keizai Shinpōsha, 52); cited by Jan De Vries, *The Industrious Revolution: Consumer Behavior and the Household Economy, 1650 to the Present* (Cambridge ; New York: Cambridge University Press, 2008), 78.

¹⁷ Jan De Vries, “Industrious Peasants in East and West: Markets, Technology, and Family Structure in Japanese and Western European Agriculture,” *Australian Economic History Review* 51, no. 2 (2011): 107–19.

Osamu Saito has challenged De Vries on his stand about ‘industrious revolution’ because he interpreted the conclusion of De Vries, a schism between the ‘market-led’ Smithian growth and shifting towards a more labour-intensive way of production. Saito rejected that industrious revolution occurred in Tokugawa Japan because there was a lack of market interaction or the environment was relatively lack of factor markets and instead, he advocated that despite the limited market growth and a moderate Smithian growth, shifting towards labour-intensive methods and market presence went hand in hand; they were not substitutes but complements. Saito suggested that Japanese way of industrialization was in conjunction with these pre-industrialization patterns of growth and the skills that have been acquired here were decisive once the ‘actual’ period of modern industrialization has come. We could infer from his implications that the uniqueness of Japanese industrialization could be a strong evidence against the Kuznetsian ‘one-goes-for-all’ way of industrialization conception.¹⁸

¹⁸ Osamu Saito, “An Industrious Revolution in an East Asian Market Economy? Tokugawa Japan and Implications for the Great Divergence.” *Australian Economic History Review* 50, no. 3 (2010): 240–61.

Recent Approaches

Regional Focus

Recently, yet another issue while working with the national income accounts has emerged: the regional aspect. Actually, regarding the use of national income accounts, the problems with ‘aggregation’ and ‘border’ as well as ‘regional disparities’ issues has been well problematized long ago and a shift in the unit of analysis from national boundaries to regional units and a stronger focus on the spatial-temporal considerations while exploring on the long comparative transformations or economic phenomena as ‘the industrializations’, has been suggested by various scholars. Here, we would like to bring these new approaches together in two sub-sectors: problems of aggregation and regional inequality.

In one recent paper Stephen Broadberry, on the latest development of great divergence debate, emphasized upon the necessity of historical national accounts are needed even more in order to enlarge the scope extensively for comparative purposes, more regional disaggregation is also essential especially within the large countries. Broadberry came to two main conclusions: a. Despite the fact that the traditional view remains valid, that is to say, the roots of Great Divergence belongs to late medieval period and it was well underway during the early modern period however, it should not be neglected that there were even more divergences within both Asia and European continents. This ‘little divergences’ needs to be carefully studied in order to make sense of the industrialization.

One second aspect of the regional focus is actually on the regional disparities. The regional inequality concerns were first brought in the literature within British context by Jeffrey Williamson. Williamson, with an analogy with the Kuznetsian inverted U curve theory for inequality within a given national economy, claimed that in the first phase of growth, the inequalities between the regions are rising, indeed. However, when the productivity rises and technology is dispersed among the periphery, the regional disparities will dim down.¹⁹ Later on, this hypothesis was to be tested, by scholars from all over Europe, ignited to make a revisit to the economic history of their relevant country with a regional focus in the last quarter of 20th century. Roses et al. have made a quest for the reasons behind the upswing of Spanish regional inequality and came to the conclusion that in fact, there is rising inequality of regions²⁰, on the contrary to the earlier hypothesis of Williamson and neoclassical free trade models; the most prominent was named as Heckscher-Ohlin trade theory. In another study, he came to the result that industrial specialization was one reason behind the regional disparities therefore; we can infer that the industrialization was on the driving seat and leading the regional disparities.²¹

A more recent study, within the context of US economy, supports the findings of Williamson. Caselli and Coleman, points to the coexistence of two basic forces behind changes in regional economic inequality: industrial specialization and labour productivity differentials. The initial expansion of industrialization, in a context of growing economic integration of regions, promoted the spatial concentration of manufacturing in certain regions, which also benefited from the greatest advances in terms of labour productivity. Since 1900, the diffusion of

¹⁹ Jeffrey G. Williamson, "Regional Inequality and the Process of National Development: A Description of the Patterns," *Economic Development and Cultural Change*, 1965, 1–84.

²⁰ Joan Ramón Rosés, Julio Martínez-Galarraga, and Daniel A. Tirado, "The Upswing of Regional Income Inequality in Spain (1860–1930)," *Explorations in Economic History* 47, no. 2 (April 2010): 244–57.

²¹ Ibid.

manufacturing production to a greater number of locations has generated the emulation of production structures and a process of catching-up in labour productivity and wages.²²

There were also methodological suggestions in order to give an account for regional differentiations. Tom Geary and Frank Stark developed a short-cut method for allocating country level GDP estimates across regions. Their aim had two aspects in it: *“to set out a method for allocating aggregate estimates of GDP across component regions; and to put it into operation by making some estimates of regional GDP in the UK in the second half of the nineteenth century.”*²³

They have reached to the conclusion that their newly developed method appears to be capable of generating fairly reliable and robust results in accordance with the particular assumptions about wages across industry that we have made for purposes of estimating country GDP between 1861 and 1911.²⁴

On the contrary, Nick Crafts have found firm evidence that in fact, the rising inequality among the regions is actually rising with a trend that much resembles the trend that has been established

²² Francesco Caselli and Wilbur John Coleman II, “The U.S. Structural Transformation and Regional Convergence: A Reinterpretation,” *Journal of Political Economy*, no. 3 (2001): 584–616.

²³ Frank Geary, “Examining Ireland’s Post-Famine Economic Growth Performance,” *The Economic Journal : The Journal of the Royal Economic Society*, 2002, 932.

²⁴ *ibid.*

just before the First World War. Therefore, an historical and causal relationship between the industrialization and the rising inequality could be inferred.²⁵

Recently, Geary and Stark have published their latest analysis on the regional inequality and objected to Crafts conclusions on the topic. According to Geary and Stark, there are ‘theoretical and practical’ problems with the Crafts extension and it may or may not be the case the regional inequality have rising throughout pre-First World War period as well as last quarter of the 20th century.²⁶

Ian Gregory made an attempt to give a contribution the way of modelling Pan-European population change through geographical information systems. The aim is to create a geographical information database for whole Europe, by utilizing census data, covering the period 1870-2000.²⁷The importance of this study is that it brings to better, data which were previously differentiated from each other because of the border issue. The difficulty is each country generally use its own system of classification while recording the census and therefore, for a sound comparison, the already refined data should be re-evaluated in order to melt them into the same pot. The aim is to get over the borders, literally, making a qualitative break regarding methodology, clustering and comparing census data all in one time, not just an

²⁵ N. Crafts, “Regional GDP in Britain, 1871-1911: Some Estimates,” *Scottish Journal of Political Economy* 52, no. 1 (2005): 54–64.

²⁶ Geary, Frank, and Tom Stark. “Regional GDP in the UK, 1861–1911: New Estimates.” *The Economic History Review* 68, no. 1 2015, 123–44.

²⁷ Ian N. Gregory, Jordi Marti-Henneberg, and Francisco J. Tapiador, “Modelling Long-Term Pan-European Population Change from 1870 to 2000 by Using Geographical Information Systems,” *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 173, no. 1 (January 1, 2010): 31–50.

accumulation of individual countries. To make them comparable. The census data and country studies, *per se*, is not enough and needs to be revisited within a more full-fledged analysis.

One inspiring work came from Nick Crafts and Niklaus Wolf on the question why the cotton-textile industrial basis was so heavily garrisoned around Lancashire regarding British case. Standing as a very recent example of regional focus and tempo-spatial analysis, the authors point out the importance of the geographical factors or ‘initial advantages’, combined with the ‘acquired’ advantages²⁸

From the same vein, using the regions as a unit of analysis, Roy suggested that the regional inequality among the regions in colonial India was heavily affected by the geographical factors, more than institutional (as answer to institutionalist school, led by Daron Acemoglu and Robinson) or political ‘man-made’ interventions.²⁹(Like Kuznetsian technological growth concept or the impulse iron hand of state in the sense of Alexander Gerschenkron³⁰)

²⁸ Nicholas Crafts and Nikolaus Wolf, “The Location of the UK Cotton Textiles Industry in 1838: A Quantitative Analysis,” *The Journal of Economic History* 74, no. 04 (2014): 1103–39.

²⁹ Tirthankar Roy, “Geography or Politics? Regional Inequality in Colonial India,” *European Review of Economic History* 18, no. 3 (2014): 324–48.

³⁰ We will mention about Alexander Gerschenkron and his perspective on the role of state on the course of industrialization in Chapter III extensively. However, very briefly, his main premise on backwardness and industrialization was that the state could turn the relative backwardness of a given country into advantage by the right ‘industrialization’ initiatives; for instance, initiating railway construction industry in the case of Tsarist Russia towards the end of 19th century.

Occupational Structure.

How we could further elaborate the ‘alternative paths and conceptions of industrialization’? One opportunity would lay in the ‘structural transformation’ issue. As we have mentioned several times up until now, according to orthodox understanding of industrialization which has been suggested by Colin Clark, Simon Kuznets or WW Rostow, structural transformation throughout industrialization is unilinear process. All the nation-states who initiates the obligatory initial conditions (including legal, political and technological) will inevitably go through the industrialization process in a very similar way to each other, in terms of labour shares and occupational structures. Accordingly, while the productivity growths would rise primary sector related productive activities in the first place, the surplus labour which could be released from primary sector without any losses from output growth, output value share among as well as labour force primary and secondary sector would start to change would be transformed into the sectors which are more related with the finished products or the manufacturing sector.

Peter Lindert and Jeffrey Williamson, unlike Kuznets and Dean and Cole, with the advent of new data and techniques, chose to work on more close to micro-level, more qualitative sources, rather than national income techniques. Parish burial registers, for instance, emerged as an alternative source of data in their work, in order to come up with a more comprehensive analysis regarding the pre-industrial revolutionary occupational structure and population dynamics and initially, put Gregory King’s estimates under question as the parts of population occupied in the manufacturing or service sectors might have been a lot more high.³¹

³¹ Peter H. Lindert and Jeffrey G. Williamson, “Revising England’s Social Tables 1688–1812,” *Explorations in Economic History* 19, no. 4 (1982): 385–408.

Nick Crafts, managed to combine and come up with a path-breaking revision of the figures from Dean and Cole as well as Lindert and Williamson³² and his estimates on the labour force shares of Britain between 1688 to 1841 became a benchmark ever since.³³ Main implication of Crafts was that the economic activity in Britain, was far more developed than what Dean and Cole and the precedents have suggested before fully-fledged industrialization. In addition to that, the tertiary sector or for now, what we can call the service sector was larger than the secondary or in other words, manufacturing sector. This was, without a doubt, was a contradictory scheme of what Kuznets have suggested earlier.

The latest attempt to revise the shift of occupational structure during the industrial revolution has come from Leigh Shaw Taylor and E.A. Wrigley. These two authors has undertaken a study on the sectorial change before and during the British industrial revolution, based on a large-scale occupational data for period covering 1750-1871.³⁴ Needless to say, this was a huge period and a bold attempt since the analysis was nearly covering all over Britain. These two authors brought the structural transformation and shift in the occupational structure question back again with their supposed association to industrial revolution, within the British context utilizing the Anglican parish registers where the children were baptized, the authors have made an attempt to come up with a countywide map of economic developments of Britain, exposed by and occupational structure and inferred from sectorial shift, flourished with temporal and spatial dimensions.

³² N. F. R. Crafts, "British Economic Growth, 1700-1831: A Review of the Evidence*," *The Economic History Review* 36, no. 2 (May 1, 1983): 177-99.

³³ Shaw-Taylor and Wrigley, "Occupational Structure and Population Change," 4.

³⁴ Online Available Paper Leigh Shaw-Taylor and E. A. Wrigley, "The Occupational Structure of England C. 1750-1871: A Preliminary Report," in *Cambridge, England: Cambridge Group for the History of Population and Social Structure*, 2008, http://cei.ier.hit-u.ac.jp/Japanese/events/documents/Hitotsubashi_LST_000.pdf; Shaw-Taylor and Wrigley, "Occupational Structure and Population Change."

Surprisingly again, they found evidence in contrast with the general wisdom about the sectorial change on the era of industrial revolution. Earlier, it has been supposed that the workforce in the secondary should have gained prominence during and after the industrial revolution and especially within the boundaries of industrial regions.

However, the authors found evidence that secondary sector, in fact, had a greater prominence long before the advent of the industrial revolution, especially within the industrial north-western part as well as some other parts of the country that did not have a wide industrial basis especially before 1815. Moreover, their findings suggest that the proportion of workforce occupied in the tertiary sector has been since late 18th century in all regions of England. The main implication of this analysis was that the first British industrial revolution as well as all rest “latecomers’ path” needs a serious reconsideration with all of its aspects.

Shaw-Taylor and Wrigley has shown that despite an enormous part of population that was still occupied in the agricultural sector, in fact, the economy was much more industrialized before the advent of the industrial revolution. This supposed to mean, more part of the workforce was employed in secondary sector, in comparison with the figures assumed in the earlier studies, instead of agricultural sector while the full-fledged industrialization leap have not yet started.³⁵ It goes without saying that this evidence goes against the Kuznetsian assumption, which presupposes a rather unilinear and orderly transmission of labour during sectorial shift; saying the dominance of agricultural workforce mitigates and moves in a rather structural way through

³⁵Shaw-Taylor and Wrigley, “Occupational Structure and Population Change,” 8.

the urbanized manufacturing sectors and reaches even more urbanized service sector as a last stage of evolution.

Another novelty, introduced by this study is that the authors, instead of utilizing a method which was based on national income accounts, gives importance to qualitative feature of the data in use. As a classical example, Simon Kuznets have utilized National Income Accounts in order to come up with stylized facts and more comprehensible and comparable schemes and trends of 'industrialization' but later on, this approach has been questioned. The points, where shift in the occupational structure has presumed to be occurred, turned out to be problematic, because Wrigley and Leigh-Shaw Taylor found sound evidence by exploring beyond the national income accounts, that supposedly unilinear trend regarding the shift in the occupational structure is simply, does not remain valid, when once we shift to qualitatively equipped data and methods.

Chapter II. Methodology.

Source of Analysis

Ottoman Tax Survey

One of the two type of source that we would like to use in this project is the Ottoman tax surveys. As the Ottoman fiscal reforms has started just before the Tanzimat period a need for the general revision of the previous complex tax system, which has putting communal and indirect taxation methods in front, has arisen. Ottoman officials were aware of the fact that for an efficient fiscal mechanism, a more individualistic and direct tax mechanism need to be developed. One option was to implement one single tax, which would be taken from every household according to their ability to pay regarding their relevant wealth.

In a perfect world, this would be an immense improvement in terms of the efficiency of Ottoman fiscal device. However, Ottomans were well-aware of their limitations in accordance with the implementation of this ‘one-single-tax’. Their aim has never been to induce such a radical change i.e. turning to an income-based tax system, but instead, at least, developing a better tax mechanism which could redistribute the present tax burden more efficiently which would mean more fair taxation.³⁶

³⁶ Özbek, Nadir, “Tanzimat Devleti, Vergi Sistemi ve Toplumsal Adalet 1839- 1908,” *Toplumsal Tarih*, no. 252 (2014): 24–30.

In order to implement this new task of identifying the relevant ‘fair’ tax rates, new institutions and roles were developed. The central appointed officers, in other words, muhassıls, were mainly responsible to supervise this process. This was, identifying household wealth according to the values of land, animal and general properties as well as the annual revenue that these properties and other earnings from various commercial occupations, for instance artisan or merchants, would generate annually.³⁷

The first attempt of this daunting task in 1840 has shown the limitation of the central authority, at least implementing this fiscal mechanism. There were huge confusions on the question of what the ‘wealth’ of a household is, various valuations were responded by objection.³⁸ Sublim Porte, who had to face with the bitter facts that the central authority is not simply capable of finishing this task alone, devised a slightly different mechanism in 1845. This time, the local or provincial authorities from various levels, even from the low-level local headmen (i.e. muhtars) as well as various religions leaders, for either Muslim or non-Muslim communities were called into service while agricultural director (ziraat müdürü) was in the role of supervision.³⁹ In addition to that, as a mollifying backward movement compared to the methodology of 1840 attempt, the wealth was not to be identified this time; it was only the annual revenue generated by the wealth in hand at present.⁴⁰

³⁷ Alp Kaya and Yücel Terzibaşıoğlu, “Tahrir’den Kadastro’ya: 1874 İstanbul Emlak Tahriri ve Vergisi: Kadastro Tabir Olunur Tahrir-I Emlak,” *Tarih ve Toplum Yeni Yaklaşımlar* 9 (2009): 13–14.

³⁸ Kaya and Terzibaşıoğlu, “Tahrir’den Kadastro’ya: 1874 İstanbul Emlak Tahriri ve Vergisi: Kadastro Tabir Olunur Tahrir-I Emlak.”

³⁹ Tevfik Güran, “Temettuat Registers as a Resource about Ottoman Social and Economic Life,” in *The Ottoman State and Societies in Change: A Study of the Nineteenth Century Temettuat Registers*, ed. Kayoko Hayashi and Mahir Aydın, Islamic Area Studies, v. 5 (London ; New York : New York: Kegan Paul ; Distributed by Columbia University Press, 2004), 7.

⁴⁰ Mübahat Kütükoğlu, “Osmanlı Sosyal ve İktisadi Tarihi Kaynaklarından Temettü Defterleri,” *Belleten* 59, no. 225 (1995): 405–411.

The ‘temettuat’ records are now gathered in ‘Başbakanlık Ottoman Archives’. A small group has been collected in Kamil Kepeci and Maliyeden Müdevver Defterler while a large group of them has been accumulated in the “Temettuat Defterleri” which is made of nine volumes. There are 17.540* books in the catalogue. ⁴¹ The relevant provinces with all of the settlements contained in their territory that could be found in the records are Ankara, Aydın, Bolu, Cezayir-i Bahr-i Sefid, Edirne, Erzurum, Hüdavendigâr, Konya, Niş, Rumeli, Selanik, Silistre, Üsküb and Vidin. ⁴²

The temettuat records include valuable information about personal information which makes it relevant for our study because it contains also the occupational data here, the tax leverage, the general wealth and the yearly earnings of the household. ⁴³

Despite the deficiencies and distortions regarding the data and figures of temettuat records, these have been the main source of many studies regarding socio-economic history of Ottoman Empire regarding the first half of the 19th century.⁴⁴ One shortcoming of these tax survey records is their static nature which only allows for the researcher to analyse one case in one given period and the relevant comparison could only be done between regions, like a cross-sectional analysis. Therefore, it would be unrealistic to expect from these temettuat records to

⁴¹ Güran, “Temettuat Registers as a Resource about Ottoman Social and Economic Life,” 76.

* The number was originally 17,540 however, later revised to 17,474 according to Said Öztürk, “Türkiye’de Temettuat Çalışmaları,” *Türkiye Araştırmaları Literatür Dergisi* 1, no. 1 (2003): 287–304.

⁴² Öztürk, “Türkiye’de Temettuat Çalışmaları,” 292.

⁴³ Tefik Güran, “19. Yüzyıl’da Temettuat Tahrirleri,” in *Osmanlı devleti’nde bilgi ve istatistik = Data and statistics in the Ottoman Empire*, ed. Halil İnalçık and Şevket Pamuk, Yayın (Devlet İstatistik Enstitüsü (Turkey)) ; no. 2396 (Ankara, Türkiye: TCBaşbakanlık Devlet İstatistik Enstitüsü = State Institute of Statistics Prime Ministry Republic of Turkey, 2000), 77–78.

⁴⁴ Ibid. 79.

account for the structural changes throughout the 19th century but for our purposes, they give the excellent opportunity for the researcher to learn to more on the socio-economic structure of some regions, with a special interest to occupations. ⁴⁵

Temettuat records were first used by Tevfik Güran. ⁴⁶ Many of the later studies were focusing on the Western part of Anatolia. Mübahat Kütükoğlu. The main importance of these records is stemming from their containment of occupational information. Although in the records of 1840, only special officers or prominent people of the town has been marked (like imam or muhtar), much more detailed information about the households are provided in the succeeding records of 1844-1845. In those, the occupational information about main person in the household is given definitions as ‘farmer’, ‘tradesman’, ‘servant’ or ‘renter’. For many of the small towns, people are mainly occupied in agriculture and animal husbandry or livestock farming. Moreover, many of them do not produce on their own land and could have additional revenue from the additional land in some instances. ⁴⁷ In addition to that, there were some cases in the larger settlements that some part of the population is generating earnings from non-agricultural, small-scale handicrafts sectors like weaving or blacksmithing. In this way, as Kütükoğlu notices, we could learn the relevant incomes of different types of occupations and compare them regionally. A more developed transport sector signifies the high level of interaction between the products of town and the surrounding cities. ⁴⁸

⁴⁵ Güran, “19. Yüzyıl’da Temettuat Tahrirleri.”

⁴⁶ For a few initial attempts to utilize temettuat registers as an historical source, see Tevfik Güran, “Osmanlı Tarım Ekonomisi, 1840-1910,” *Türk İktisat Tarihi Yıllığı* 0, no. 1 (1987): 225–303; Tevfik Güran, “Ondokuzuncu Yüzyıl Ortalarında Ödemiş Kasabasının Sosyo-Ekonomik Özellikleri,” *İktisat Fakültesi Mecmuası* 41, no. 1–4 (1985): 301–19; cited by Kütükoğlu, “Osmanlı Sosyal ve İktisadi Tarihi Kaynaklarından Temettü Defterleri,” 396.

⁴⁷ Güran, “Osmanlı Tarım Ekonomisi, 1840-1910,” 252; cited by Kütükoğlu, “Osmanlı Sosyal ve İktisadi Tarihi Kaynaklarından Temettü Defterleri,” 403.

⁴⁸ Kütükoğlu, “Osmanlı Sosyal ve İktisadi Tarihi Kaynaklarından Temettü Defterleri,” 403–404.

One of the most advantageous aspect of the 1845 records (1241 in hicri calendar) is its containment of the 1844 actual and 1845 probable incomes. 1840 records only includes the wealth of all types of endowments and real estates. ⁴⁹

Census Records

Regarding Russia and censuses, we have one and only all-Tsarist Russian census 1897 as well as four Soviet Russian censuses (1926, 1959, 1970, and 1979) available. For the purposes of this study, we only chose to work with 1897 and 1926 census records in order to keep the dialogue with the Ottoman case. These include incredibly precious and helps us learn more on age and sex composition, ethnic and language details, marriage and family structure, migration patterns, urban and rural densities, educational attainment and literacy levels and for our particular concern, occupations

Despite this rich source of information, these censuses were underutilized by researchers, as Michael Sacks notes. ⁵⁰ He gives a few reasons for this: for instance, studies which were undertaken outside Soviet Union, mainly in the West, generally was focusing on non-empirical studies so that the literature is filled up with non-quantitative history; the focus was on politics. The factors as language barrier or unfamiliarity with the resources, which would mean further workload are also could be shown as a reason for this non-existence. Most of all, of course,

⁴⁹ Öztürk, "Türkiye'de Temettuat Çalışmaları," 289.

⁵⁰ Micheal P. Sacks, "Occupation and Work Force Data in Russian and Soviet Censuses," in *Research Guide to the Russian and Soviet Censuses*, ed. Ralph S Clem, Studies in Soviet History and Society (Ithaca, N.Y.) (Ithaca: Cornell University Press, 1986), 99.

especially during the Cold War years, there were ideological and political concerns were coming upfront.

Working with Soviet and Russian census data is not an easy task though. First and foremost, the definition differences between different censuses rise as a significant problem. For some of them, what urban means differ and until the next one due to administrative decisions. Likewise, regarding the social stratification researches, the relevant estates, like peasantry, nobility or merchants could be widely misleading. One should be very cautious about these details. All in all, these create the comparability problem between different Russian or Soviet censuses, let alone the other census records among the World. As Sacks puts it, there is a danger to put into trap of comparing ‘apples and oranges’.

1897 and 1926 Russian Censuses contain the relevant occupational data. According to Sacks, 1926 census has the richest data of all other censuses regarding the occupational data, not only in the sense of which industry contains more employment but also it gives the opportunity to undertake a much wider analysis with the considerations of nationality, marital status, education, residence and family size.⁵¹ Despite this, very few studies made use of occupational data in the censuses. One of them was Norton Dodge⁵² a descriptive work on women’s occupations; Michael Sacks has come up with a wider analysis, bringing four censuses together 1926, 1939, 1959 and 1970 in order to bring a more detailed gender comparison on occupations and also found out where these differences concentrated. Alastair McAuley⁵³ does a similar

⁵¹ Ibid. pp.

⁵² Norton T. Dodge, *Women in the Soviet Economy: Their Role in Economic, Scientific, and Technical Development* (Baltimore: Johns Hopkins Press, 1966).

⁵³ Alastair McAuley, *Women’s Work and Wages in the Soviet Union* (London ; Boston: Allen & Unwin, 1981).

study but his analysis is mainly based on the period between 1939 and 1970 and differs from previous studies with the interpretation and measurement methods. For instance, McAuley does not make it open how he did cope with a very specific problem that almost every researcher who works with the Russian or Soviet Censuses: 'the missing people' problem.⁵⁴ Among all census records, studies which takes 1897 and 1926 Census records regarding occupational data is almost non-existent.

Issue of 'Missing' People

Before getting into the analysis, one must notice that both 1897 and 1926 census records contains an issue which we would need to tackle, what we would call here, the missing people problem. The problem stems from the following reason: In the records of both censuses, there are several levels of information regarding occupational data. In 1897, the case is straightforward since there are only two levels: the sector name as a subtitle and the name of the occupation itself. In census 1926, the picture is more complicated since there are five different levels of occupational information, containing various dimensions: the labour type (worker, office worker, own account worker etc.), the industry (rural economy, factor production etc.), and two more subtitles under these levels, which depends on which industry the occupation belongs to. The actual occupational entry is only at level 5.

Speaking for both censuses, as the levels are hierarchically order, there are some subtotals of each sectoral title. Suppose, in 1897 census, if there are five different occupations under sector

⁵⁴ We will give more details on the missing people problem later in this Chapter.

x, then the entry sector x has a title total for both male and female. Same goes for 1926, where there is Labour type a industry I, sub-sector Level 3 and 4, like metallists or woodworkers and under them, eventually the name of the occupation itself, like blacksmith. As it is the case in 1897, 1926 also has subtitle entries for each level which gives us four different levels of subtotals.

The crucial part is the following: taking the last to levels, (Level 4 and occupation in 1926) and (Sector and Occupation in 1897) into consideration, not always the individual entries under a specific subtitle does add up to the hierarchically higher level. In other words, sometimes when we add the entire of individual occupations listed under subtitle metallists, for instance, we cannot reach the subtotal given for metallists for that specific case, our sum would not be equal to the relevant figure given in the census, and ours fall short. This is because, census takers chose not to enter the relevant figure regarding *all* of the occupations under the subtitle; if there is relatively small number of people occupied with a specific job, in order to shorten the list under the subtitle, they were neglected.

One big problem with these neglected or missing people is that they are in fact belong to a specific industry but we cannot now what is the exact occupation they have. In order to see the extent of the problem and in search for a method to deal with this problem, we have suggested two methods and tried them both to see which one would lessen the overall accountability of our study.

In method I, we simply erase all the ‘rest’ or ‘missing’ people for both censuses and continued as if they have never existed. For Census 1897, this would not create too much problem since the rest part only takes a total %3.48 of all gainfully employed people. However, regarding census 1926, the relevant loss is too much, around %13.87.

Therefore, we have developed another method, which is only applicable for census 1926. Actually, ‘the missing people’ problem is not that much destructive as it first seems because some part of it is curable in census 1926. This is because for some occupations, we can already know what sub-sector we can include them in, even though we don’t know what exact occupations that these missing people have. Working only with double-digit PSTI gives us the opportunity to lessen this ‘missing people problem’.

To be clearer, one example will suffice. We know that all the specific occupations under “Wood industries” are under PSTI 2_25, without any exceptions. Therefore, we can safely assume that a ‘missing’ person could be classified as such, even though we don’t know his actual occupation. PSTI Double Digit implementation makes this possible. However, the problem could be sometimes non-curable, as it is the case in metallists. Under this title, there are different type of occupations where PSTI classification will code them differently. A blacksmith could be PSTI 2_61 whereas a machine implementer could be PSTI 2_65. Unfortunately, 1926 census records put these individual occupational entries under the same title: metallists. We would not know, how we should code the ‘missing people’ in such a case.

The aim of method II was hence, to identify the problematic ‘Subsectors of Level 4’ and differentiate between which parts of the problem that we can cure and which part of them, we cannot. In cases that I could not deal with the ‘missing people’ problem, I have left them out. The results are much more positive than those we have obtained from Method I. This time, only %4.71 of the people will be left out.

Therefore, for the rest of the analysis, I have utilized Method I for Census 1897 and Method II for Census 1926, in order to tackle with ‘missing people’ problem which in my opinion, the best strategy to keep the reliability of the analysis without losing the richness of the data content and dimensions. The relevant results that I have obtained from Method I and II are below.

Method 1) Erase ‘the rest’ altogether.

Table 1-Results of Method 1: All ‘rest’ deleted, 1897

	Ivanovo Male	Ivanovo Female	Ivanovo Both	Ekaterinburg Male	Ekaterinburg Female	Ekaterinburg Both	Grand Total
1897_total(in numbers)	21659	11508	33167	13837	9066	22903	56070
Remained after deletion(in numbers)	21069	11441	32510	12930	8677	21607	54117
Missing data (in numbers)	590	67	657	907	389	1296	1953
Missing data (in percentages)	2,72%	0,58%	1,98%	6,55%	4,29%	5,66%	3,48%

Table 2- Results of Method 1: All 'rest' deleted, 1926

	Ivanovo Male	Ivanovo Female	Ivanovo Both	Ekaterinburg Male	Ekaterinburg Female	Ekaterinburg Both	Grand Total
1926_total	34129	29962	64091	43344	22915	66259	130350
Remained after deletion(in numbers)	27447	26772	54219	36918	21133	58051	112270
Missing data (in numbers)	6682	3190	9872	6426	1782	8208	18080
Missing data (in percentages)	19,58%	10,65%	15,40%	14,83%	7,78%	12,39%	13,87%

Method II) identify the subtitles which turns into problematic while using PSTI and include the rest.

Table 3- Results of Method II: All 'rest' deleted for Census 1897 and 'rest' selectively deleted for 1926

1926	Ivanovo Male	Ivanovo Female	Ivanovo Both	Ekaterinburg Male	Ekaterinburg Female	Ekaterinburg Both	Grand Total	Ivanovo Male
Missing people (in numbers)	6682	3190	9872	6426	1782	8208	18080	100,00%
Partially missing(in numbers)	2041	388	2429	2991	726	3717	6146	33,99%
Available(in numbers)	4641	2802	7443	3435	1056	4491	11934	66,01%
1926	Ivanovo Male	Ivanovo Female	Ivanovo Both	Ekaterinburg Male	Ekaterinburg Female	Ekaterinburg Both	Grand Total	Ivanovo Male
Missing people (in numbers)	34129	29962	64091	43344	22915	66259	130350	100,00%
Remained after partial deletion(in numbers)	32088	29574	61662	40353	22189	62542	124204	95,29%
Missing data (in numbers)	2041	388	2429	2991	726	3717	6146	4,71%
Missing data (in percentages)	5,98%	1,29%	3,79%	6,90%	3,17%	5,61%	4,71%	

Verdict: Choosing Method 1 while analysing 1897 and Method 2 while analysing 1926.

Issue of Unpaid Family Labour.

One problematic aspect with the Soviet Censuses is the unpaid family labour issue. Especially in the rural areas of Soviet Russia, the family members, like children or females who were in fact working in the fields for agricultural production could be overlooked by census taker. This would lead an understatement of the 'working population' and the number of females who were having an occupation and working actively, although this problem generally haunts the rural part .Sacks reminds us that in the beginnings of industrialization, the relevant numbers and fault could also be detected in the urban centres or cities.⁵⁵

One another problem is the season or intermittent labour which were not reflected in the census records in the way that it should be.⁵⁶ This problem was also seen in the Western counterparts of census studies as Louise Tilly and Joan Wallach Scott have remarked.⁵⁷ While the males could take the long roads and travel females tend to stay in the village in order to continue with the agricultural production. Soviet censuses were conducted in winter and therefore, the census-takers were not asked specific question about their occupations during the rest of the year. Hence, there is a high probability that agricultural workers could be underestimated in numbers.⁵⁸

One another significant problem with Russian and Soviet censuses are the detailed information about the secondary occupations. Fortunately, 1897 and 1926 Censuses are quite rich regarding

⁵⁵ Louise Tilly and Joan Wallach Scott, *Women, Work, and Family* (New York: Methuen, 1987); cited by Sacks, "Occupation and Work Force Data in Russian and Soviet Censuses," 100.

⁵⁶ Sacks, "Occupation and Work Force Data in Russian and Soviet Censuses," 101.

⁵⁷ Tilly and Scott, *Women, Work, and Family*; cited by Sacks, "Occupation and Work Force Data in Russian and Soviet Censuses," 101.

⁵⁸ Sacks, "Occupation and Work Force Data in Russian and Soviet Censuses," 101.

this problem since we have two levels of data which is not a luxury that researchers who are dealing with later censuses could enjoy.⁵⁹

In addition to this, there was probably an underestimation regarding handicrafts and cottage industries beside agriculture, this is because commonly, the household leader only was taken into account. Moreover, generally economic activity for youngsters start too early and many children below the age of 10 were actively engaged in relative small-scale sectors or agricultural production. Again, we are lucky in the respect that children between 10-14 ages were taken into consideration as working population. Sacks also note that since the social status of women pretty low, their economic activities could have been overlooked.⁶⁰

1897 census stands as slightly different as Soviet censuses because after Bolsheviks have taken over the government, they have brought a completely different social inquiry point of view and moreover, the whole economic structure of society has already changed. This fact, without a doubt, makes life hard for the researcher. However, while this well-documented difficulties gives harm to comparative feature, in our study, these problems are limited with some certain areas like the social estates. In 1897, there were estates like peasantry, meschanstvo, high nobility, without a certain delineation and without a doubt, for the researchers who are studying social stratification, this is a concern. Fortunately, regarding our course, the differences are manageable since the occupational data found in both censuses could be adapted into our method PSTI here.

⁵⁹ Ibid., 102.

⁶⁰ Ibid.

There are two types of list, varying in length, having the definitions of occupations in both 1897 and 1926 census. Regarding 1897 census, the detailed list of occupations, which has 65 main titles of occupation (if we include the classification of ‘other occupations’) and if we add up the subtitles which comes under the main titles with varying detail level, we come up 390 titles of occupations listed.⁶¹ These titles with the relevant figures could be found in three different type of volumes in the census records: a. volumes containing individual gubernia(province) records, b. volumes that contains detailed data and information on four different cities(Moscow, St. Petersburg, Odessa and Warsaw) and c. volumes, which includes only the Tables XX (Распределение населения по видам главных занятий и возрастным группам по отдельным территориальным районам)⁶², which purely includes occupational titles and figures related with it. These particular type of volumes have classified their data according to both gubernias as well as some prominent cities in those gubernias as well, for all twenty regions (rayon) of Russia. The latter types of volumes, which has some city level information as well, unfortunately, only has the main 65 titles and lacking in detail level. Both the volumes including four individual cities as well as the volumes that only contains Table XXs remain superior in the detail level, having all 390 titles of occupation.

⁶¹ Первая Всеобщая перепись населения Российской империи 1897 г. / под ред. [и с предисл.] Н.А. Тройницкого. - [Санкт-Петербург]: издание Центрального статистического комитета Министерства внутренних дел: 1899-1905. - 27 см.
accessed through <http://leb.nrl.ru>

⁶² Распределение населения по видам главных занятий и возрастным группам по отдельным территориальным районам: [Т. 1-4] / [предисл.]: Н. Тройницкий. - Санкт-Петербург: паровая скоропечатня П.О. Яблонского: 1905. - 4 т.; 27 см. - (Первая всеобщая перепись населения Российской империи 1897 г.; таблица 20 / под ред. Н.А. Тройницкого). accessed through <http://leb.nrl.ru>

Issue of ‘Working Population’

There is an important difference that we need to mention: “samodeyatelnim”; which means, self-active or self-sufficient, in the 1926 Census introduction has been meant as: a person who can earn his/her own living on the contrary, “nesamodeyatelnim”, who cannot himself or herself earn a living in order to survive. This would mean, a children, who is at the age of 3, is obviously not included in the list of “samodeyatelnim” and therefore, not in the working population. A person who is included in the list of “Samodeyatelnim” does not necessarily has an occupation but still, even though he is unemployed, he is eligible to have an occupation and therefore, self-sufficient. Obviously, there would be differences between the totals of whole population and the working population; meanwhile, it has been indicated that the non-working population makes up %40 of the whole population. The ‘self-sufficient’ or ‘working population ‘ as we call them, also includes army members, persons who does not have an occupation but still earning their living by other means, i.e. being an house owner and having rent from it or unemployed. In order to be eligible to go in the ‘working population’ list, a person should be at 10 or older, however, it has been indicated that there were cases were even younger persons were included in the ‘working population list’ under the ‘title of unpaid family member’; of course, most of these cases were under the ‘rural economy’ title.

One another hierarchical title is the sector; where there have been nine of them were described: rural economy, factory production, cottage industry (kustar-remesleno production, small-scale handicraftsman), building, railway transportation, other ways of transportation, commerce and credit, institutions (local or national government services) and other sectors. One hierarchal below is the further down level sector, this could be metallist, forestry or a central government

administrative officers. The lowest level is the name of actual occupation, a blacksmith, a chopper, an inn-keeper, a non-qualified construction worker. However, one must notice that a blacksmith, does not always have to work within factory production and he could be placed in trade and commerce or railway workers. As a principle, in order to keep our work compatible with PSTI method, we have assumed here a metallist, even though works in the trade and commerce, has been classified as a metallist in our classifications.

Turkish Census Records of 1927, 1935 and 1945

The roots of a need to conduct a general census which was substantial in extent and analysis depth, goes back to mid 19th century. Sublime Port showed more intention to govern more properly in terms of wealth allocation. In order to do so, a modern general census was needed, instead of only focusing tax purposes.

The first step in order to build up a modern central institution to develop better policies for population and provision could be taken as a new ministry to be established called ‘Ceride Nezareti’⁶³ in 1831. The main purpose of this ministry was to keep track of fiscal demographical and statistical indicators and develop policy prescriptions.⁶⁴ The decision to conduct a general census was taken in 1914⁶⁵ however; the break out of First World War has hindered this census to take place.

The first general census took place in 1927 by the newly established Turkish Republic. Despite the efforts, this could not be reckoned as a successful census initiative. According to the first

⁶³ Fevzi Çakmak, “Cumhuriyet’in İlk Yıllarında Nüfusu Kayıt Altına Almaya Yönelik Girişimler,” *ÇITAD* 8, no. 18–19 (2009): 90.

⁶⁴ “Ceride Nezareti,” *Türkiye Diyanet Vakfı İslam Ansiklopedisi*, 1993, 409–410 online available source at:<http://www.islamansiklopedisi.info/>.

⁶⁵ Sicil-i Nüfus Law

results obtained from census, the general population of Turkey was 13. 629.488. However, later on, according to the population registers those were to be found in every administrative unit regardless of their size, it has been revealed that the the total sum appeared to be 14.145.751 which means that almost 500,000 people were missing in the official census records.⁶⁶

According to Justin McCarty, the correct number of people who were living in Turkey in 1927 was 14.589.149 and notes that the figures appeared in the official census records were probably deficient. Therefore, he labelled this attempt as an unsuccessful case of census from various aspects. In fact, he remarks that the results obtained from 1927 census records were never used by Turkish Statistical Institute.⁶⁷

One of the most problematic aspect of this census records was the issue of ‘unsettled population’ who did not have a permanent living place and usually on the move in order to earn their living. Inability to count this part of population could be held accountable for the undercount. ⁶⁸

The census of 1927, regarding our own purposes in this thesis project, was also lacking from the perspective of occupational data coverage. Since it was only years later the end of First World War which was followed by Great Independence War of Turkey, the main purposes of the state was to obtain information about the socio-political situation of the population of newly

⁶⁶ Çakmak, “Cumhuriyet’in İlk Yıllarında Nüfusu Kayıt Altına Almaya Yönelik Girişimler,” 106.

⁶⁷ Justin McCarthy and Bilge Umar, *Müslüman ve Azınlıklar: Osmanlı Anadolu’sunda Nüfus ve İmparatorluğun Sonu = Muslims and Minorities* (İstanbul: İnkılap Kitabevi, 1998), 163.

⁶⁸ Ibid. 100.

established Turkish Republic. Therefore, the differences between occupations was coming secondary among other interests and taken in from a rather general perspective. Therefore, unfortunately, our analysis that was conducted in this thesis project is lacking the sub-sectoral level of analysis regarding the census of 1927. I will only consider the occupational breakdown that appears in the results of 1927 Census records on the first (sectoral) level.

As a result upon the failure of 1927 Census taking initiative, Turkish government decided to conduct a new general census in 1935. This time, the precautions in order to conduct the census properly were more carefully taken. More than that, upon the rising economic and industrial activity, the occupational insight has been widened and persons were not just asked their sectoral but also, their sub-sectoral occupations. The results were reckoned as reliable so that Turkish Statistical Institute opted to start its analysis from 1935 Census Records.⁶⁹ Therefore, in this thesis project, despite the fact that I have included 1927 Census Records into our analysis, the analysis regarding 1935 and 1945 Census records should be reckoned as more reliable and the relevant results are more robust.

⁶⁹ McCarthy and Umar, *Müslüman ve Azınlıklar*, 152.

Tool of Analysis

PSTI as a Classification System.

In this project, we would like to utilize PSTI as our tools of analysis. This useful categorization tool has been developed by British economic historian Sir Edward Anthony Wrigley. Before going into the rationale of PSTI and in what ways it stands as a superior classification tool among the others in our case, namely HISCO and Booth-Armstrong, we need some even more essential questions.

First, why do we need a classification system regarding the occupational data? In order to make sense of this question, we need to take a closer look to our source data. Wrigley points out that without devising and operations on the raw data, the occupational definitions and structures of two British censuses, 1841 and 1851 are not ‘directly’ comparable at all. As a simple example, Wrigley reminds us that the ‘carpenters’ are likely to be higher in number in the census of 1851, simply because the officers, instead of asking naively of who really are carpenters in the given household, tended to increase the number of returns and added even over-aged, non-working carpenters into the records.⁷⁰ Dealing with two different types of source data from two different countries and even two more different ‘newly established’ revolutionary states, we can be almost sure that same problem applies in our case. We need a unifying scheme in order to get rid of incompressible and senseless comparison results.

⁷⁰ E. A. Wrigley, *Poverty, Progress, and Population* (Cambridge, UK ; New York: Cambridge University Press, 2004), 133.

One problem that we need to issue with the thesis project is the following: We need to track the shift in the occupational structure, however, the occupational data in different sources that we plan to use are in four different types. Without taking notice of how the occupations are defined and recorded in either Ottoman tax survey of 1845 or Republican census of 1935, as well as Russian 1896 census and Soviet 1926 census, it would be an even harder to task to deal with. The very occasional problems that one encounters while dealing with occupational data has been listed by E.A Wrigley, in an unpublished paper.⁷¹

First, there is the time allocation-occupation issue which is basically about the fact there is simply no way of knowing whether the announced occupation is allocated the exact amount of time that the labourer gives. In other words, following from the Wrigley's example, if the carpenters make %3 of all occupations that does not necessarily mean that carpenter occupation takes % 3 of all the productive activity. One another problem is the rising amount of women occupied in gainful employment but this has not been reflected in the occupational structure. It does not make so much difference whether one productive activity has been undertaking in one location or another but in a census data for instance, this change of location of production could be widely reflected in the occupational structure. The multi-functional labourers or the ones who makes an earning from more than occupation is yet another issue.

⁷¹ Wrigley, E.A. "The PSTI system of classifying occupations" Unpublished Paper.

*“Making effective use of information about occupational structure is certain to require an appropriate framework of interpretation if reliable conclusions are to be drawn from the data, and this issue is relevant when making use of contemporary material as well as in marshalling historical evidence”*⁷²

There has been several methods developed in order to make sense of the census data. Before the ‘marshalling the row’ process if we borrow the term from Wrigley himself, one needs to keep in mind that even there are different ways of structuring by two different schemes. One of them is utilized by Registrar General while processing 1851 census data, the other one by Charles Booth in order to make a set up a more comprehensible ‘dialogue’ between successive censuses.

What kind of advantages does PSTI provides us when facing these difficulties while dealing with occupational structures in the census data? The main rationale behind the PSTI classification system is that it is taking a demand-based analysis in the centre. Behind all, there is the idea of ‘the most basic needs come first’. For instance, since the most basic need of humans in order to survive is feeding themselves, the most demanded kind of product in the most basic form of an economy peasant economy. We expect to see the agricultural sector and the occupations related with it in their most expensive form. However, whenever the agricultural production exceeds the level that is necessary for provision of the society, in other

⁷² Wrigley, E.A. Wrigley, E. Anthony. “The PSTI System of Classifying Occupations.” *Unpublished Paper, Cambridge Group for the History of Population and Social Structure, University of Cambridge*, 2011. <http://www.geog.cam.ac.uk:8000/research/projects/occupations/britain19c/papers/paper1.pdf>. p.4

words, real wage per capita rises, there would come the needs of manufacturing products and this line of progression would lead us to up until industrial needs. In an advanced economy, we would expect 'services industries' like transportation sector has the highest weight beyond all.

As the authors clarify, the main difference of PSTI is that by this classification system, one could capture the effect of different income elasticity of demand for primary, secondary and tertiary products. This classification could work based on the assumption that as the real income rises, the weight of expenditure regarding the three sectors of the economy would also go also alter. In other words, when people have more disposable income, they would spend more on the products from service sector so that industries such as transportation or communication would be more likely to become a target when consumers want to spend their money when compared to number of transactions that remains in the primary sector. Certainly, PSTI system has some drawbacks but as Wrigley and Shaw-Taylor has shown us that when we look at the current state of different countries and their level of development, most of them displays an occupational scheme that fits with the logic that makes PSTI a justified choice of classification.

Unit of Analysis

On the Selection of Cities

One another task in this project is to depict the relevant cities of comparison. Here, I had the most suitable choice from the Ottoman case as Ankara and Bursa. There are several reasons for this. One must notice the absence of industrial centres with quintessential importance like İstanbul and İzmir. At this specific point, data limitations struck my possibilities. İstanbul in 1845 was exempt from the tax census. İzmir was included but unfortunately, the registers did not survive until today. However, this might be a 'blessing in disguise' for the project because inclusion of these two cities, which were undisputedly well above the general trend in Ottoman Empire and therefore, their inclusion might have been a danger to miscue the general picture. Moreover, the cities that I have chosen here would provide me wide opportunities to track down the economic progress and structural transformation from various aspects. Ankara, a hitherto fledgling city in the beginning of 19th century, becomes the capital of newly established Turkish republic and without a doubt, would be a good place to seek some structural changes as an historical transportation hub. Bursa has already established itself as a raw silk production and manufacturing stronghold back in the first half of the 19th century. However, regarding the de-industrialization process given by the rise of British labour productivity and the invasion of cheap manufacturing products, in what extent did the city maintain its economic activity and in what ways could also be a legitimate question to explore more.

The Russian counterparts of the Ottoman cities should resemble the cases, in terms of economic activity. The omission of St. Petersburg and Moscow from the analysis might seem to be intriguing at first sight since this would mean to leave aside the rich literature opportunities. However, while İstanbul and İzmir have been left out from this analysis, having these two commercial hubs of both Tsarist and Soviet Russia, could give significant biased results. For my purposes for this thesis, I took Ivanovo, which was one textile centre of the 19th century, which remained to provide a major part of all Russian cotton products and as an export-based industry stands also as a commercial centre with rapid urbanization. Ekaterinburg, my other city choice from Tsarist Russia, sits in the Ural Region which was one of the first state-led industrialization projects took place when Peter the Great decided to modernize Russia and implement a series of plans to improve metallurgy industry. Meanwhile, Ekaterinburg was designed as a transportation hub between the Asian part and the European part of the Russia or in other words 'a window to the Asia'. Traditionally having a lively commercial economy, Ekaterinburg, later on improved its administrative capabilities when the Bolsheviks came into power which was resulted in further urbanization.

Chapter III. Occupational Transformation and Industrialization from Late Tsarist-towards Early Soviet Russia: 1897-1926

In this chapter, we would like to analyse Russian industrialization process throughout the period between roughly mid-19th century until the end of NEP⁷³ period, through the occupational change according to the census records of 1897 and 1926. By using occupational structure as an index of social change and hence, a reflection of the tastes, needs and demands of the society, we would have a chance to check whether previous suggested or presumed links between industrialization, occupational transformation, urbanization and the economic growth processes in the sense of social transformation are valid in our specific Russian case. As we would like to argue in this chapter, the earlier studies on Russian industrialization has either been concentrating on the industrial development via output levels or structure, the proletarianization process of the agricultural workforce or the development of factory production from cottage industries or lately, the living standards and the overall quality of life during the industrialization process. Although there were some attempts to give a special focus on occupational structure for a given year or period, there have been no previous attempts to bring two census records, All Russian Census of 1897 and Soviet Census of 1926 together and making them compatible in order to analyse the occupational change.

⁷³ New Economic Policy, a special term which thought to keep its influence throughout 1920s. This was when War Communism mentality has been abandoned and revolutionist Bolshevik Party, opted to find a more collaborative way between the fully planned states centered socialist economy and free market economy. It has been rendered as a more collaborative attempt to integrate relatively isolated classes of society; namely peasantry and the petty bourgeoisie, regarding resource allocation

As the orthodox understanding of industrialization supposes, the process of industrialization which would lead to economic growth and prosperity would start with productivity gains in agriculture and this would unleash the abundant labour supply from agriculture and rural places to urban centres where secondary or derivative production process is being upheld without any loss of output. ⁷⁴In the beginnings of the industrialization process, these secondary manufacturing works needed a lot of skill and remain labour-intensive however, within the same line, mechanization will eventually bring a labour-saving, cost-efficient production process where factor the potential labour productivity would be fully exploited. Eventually, the production process would proceed to the next level; where the majority of the output within the national income would be created within tertiary, service activities. This time, since the productivity is on the highest level in both agriculture as well as manufacturing, the demand for labour would be relatively low but the relevant wages are quite satisfactory and the service sector would create a new bulk of demand for more sophisticated type of activities. The implication of this ‘rationalization in the production process’ within the ‘location of production’ framework could be multifaceted: while the path would lead to urbanization where rural population would need manufacturing jobs in urban places, it could also end up being some of the rural places becoming the heart of production process or they may be cases which sits between these two ends.

My task in this chapter would be to track the changes in the occupational structure in two Russian cities, Ivanovo and Ekaterinburg by the help of two census records: 1897 and 1926, which contains a relatively detailed occupational data and in the same time, relate the supposed

⁷⁴ Clark, *The Conditions of Economic Progress*.; Allan G. B. Fisher, “Production, Primary, Secondary and Tertiary,” *Economic Record* 15, no. 1 (1939): 24–38.

transformation in the occupational sense with the progression of the city population. This would provide us to build a common platform where it would be possible to compare the cases in this thesis project with the parallel transformations in different settings. Leigh Shaw Taylor and E.A. Wrigley have made their analysis regarding England and many other studies would follow.⁷⁵

I would like to start this chapter with a brief sketch of earlier studies on Russian industrialization and structural transformation. After that, I would like to come up with our findings, as a result of our analysis of the 1897 and 1926 Census records, for both Ivanovo and Ekaterinburg. As the last part of this chapter, I would like to compare and contrast my findings on earlier literature on industrialization, both in general and in Russian context combined with the individual histories of the relevant cities that we take into focus here: Ivanovo and Ekaterinburg.

Russian Industrialization and Occupational Change: Earlier Literature.

The earlier literature on the Russian industrialization in the 19th and perhaps the beginning of the 20th century has a slippery ground. Throughout the 20th century, for obvious reasons, there have been many different approaches developed towards this issue, however, this was not a simple case. On the one hand, there were the Soviet scholars, who concentrated on monographs and analysing the progress of individual industries in terms of the quantity, quality and variability of outputs, the number of people who were employed in the factories, the level of

⁷⁵ Shaw-Taylor, Leigh, and E. A. Wrigley. "The Occupational Structure of England C. 1750-1871: A Preliminary Report." *Cambridge, England: Cambridge Group for the History of Population and Social Structure*, 2008.

mechanization etc. On the other hand, there was another strand to take up the issue: Western scholars who have chosen Russia as their primary area of research and these were the people who made use of Soviet archives and datasets which came late as 1950s very extensively. Many of these studies were done within ‘Modern Industrial Growth’ framework, which was initiated by Simon Kuznets and the relevant methodological tools, mainly quantitative, like the national income accounts. Both of these strands have their limitations which we would like to get over here, by introducing our own approach which will come in the subsequent chapters however for now, we need to look back at the earlier literature.

Early View from Marxist Tradition.

Regarding Russian industrialization, one of the earliest treatments in the modern sense, came from the great Bolshevik leader and the revolutionary scholar, Vladimir Lenin. In his treatment to the development of capitalism in Russia, Lenin has argued for an optimistic understanding of 19th century Russian capitalism.⁷⁶ Notoriously, having embraced Marxist view of political economy, Lenin was claiming that industrialization and economic growth will come along the way with the development of capitalism in Russia like everywhere else in the world. Writing in 1899, his claims were to prove the Narodniks (Populists) wrong on the dynamics of Russian capitalism. For Narodniks, Russian peasantry had their peculiar features with the land communes and other traditional institutions which would be protected therefore, capitalism cannot grow by its own nature fully or at least, like the way it did in the West due to its dynamics which would induce under-consumption tendencies.⁷⁷ For Lenin, reflecting the Marxist point of

⁷⁶ Vladimir Ilich Lenin, *Collected Works*, vol. 3 (Moscow: Progress Publishers, 1960).

⁷⁷ Vincent Barnett, *A History of Russian Economic Thought* (London; New York, NY: Routledge, 2005), 41.

view, inherently, capitalistic forces will grow with the same dynamics all over the world. Despite the different forms and shapes, the essence is the same and Russia is no exception. Lenin argued that at that time, Russia was in a transitory period with the existence of a dual economy. On the one hand, there was the ‘corvee economy’ based on feudal and semi-feudal relationships while landlords still exploiting peasants through extra-economic institutions, namely serfdom. This ‘older’ type of economy was based on less-productive, labour intensive production process while there was also a fledgling, capital-intensive, modern type of economy which was based on machinery production.

“Thus, capitalist economy could not emerge at once, and Corvée economy could not disappear at once. The only possible system of economy was, accordingly, a transitional one, a system combining the features of both the Corvée and the capitalist systems.”⁷⁸

Against the claims of Narodniks, on the structure of Russian capitalism, for Lenin, there was a process called ‘peasant differentiation’ in the agricultural production sphere was already in effect. While using zemstvo⁷⁹ records, gathered from various gubernias, Lenin supported his claims that through peasant differentiation, i.e. while some of the peasants would gather larger holdings and the rest would remain landless, agriculture would be commercialized and the

⁷⁸ Lenin, *Collected Works*.

⁷⁹ The zemstvo has been defined as: “organ of rural self-government in the Russian Empire and Ukraine; established in 1864 to provide social and economic services, it became a significant liberal influence within imperial Russia. Zemstvos existed on two levels, the uyezd (canton) and the province; the uyezd assemblies, composed of delegates representing the individual landed proprietors and the peasant village communes, elected the provincial assemblies. Each assembly appointed an executive board and hired professional experts to carry out its functions.” “Zemstvo,” *Britannica Online*, n.d.

corvee economy which was based on feudal and semi-feudal relationship would be dissolved.⁸⁰ Lenin claimed that capitalism needs a domestic market to be created and these forces were well active in Russian lands throughout the Empire. Capitalist manufacture and capitalist domestic industry was in the making via development of large-scale machine industry.⁸¹ For Lenin, unlike Narodniks who claimed that Russia had its peculiarities and therefore, capitalism could not establish itself as a mode of production, capitalistic dynamics has already started to transform the production dynamics in Russia as it would do everywhere else in the world.

In accordance with structural transformation or occupational transformation, we did not expect to find a central focus in Lenin's work however; we would be headed to wrong direction if we wholly neglect the insight on industrialization he has shared with the readers regarding occupational transformation: first and foremost, industrialization needed the peasantry leave the agricultural occupations: “ *the percentage of the urban population is constantly growing; that is a movement of the population away from agriculture toward-commercial-industrial occupations may be clearly noted*”⁸²

Regarding 19th century industrial development in Russia; one another work could not be passed unmarked: “*The Russian Factory*” by Mikhail Tugan Baranovski.⁸³ (1898) This colossal study,

⁸⁰ Lenin, *Collected Works*, 3.70–188.

⁸¹ *Ibid.*, 3:384–453.

⁸² Lenin, *Collected Works*; cited by P. I. Liashchenko, *History of the National Economy of Russia, to the 1917 Revolution* (New York: Octagon Books, 1970), 453–454.

⁸³ M. I. Tugan-Baranovskiĭ, *The Russian Factory in the 19th Century*, American Economic Association. Translation Series (Homewood, Ill: Published for the American Economic Association by R. D. Irwin, 1970).

which takes the Russian factory production on its focus from even back in the 18th century as well as factory production before the great reforms (1861) as well as after great reforms. This study is crucially important since within this study, Baranovski is trying to establish a historical continuity, a link between the traditional Russian industry from Petrine or Catherine Periods, which was a missing aspect in the following Soviet literature, which were at best, concentrating on the late Tsarist Russia industrialization, perhaps from 1890s, as a background for the Bolshevik Revolution and mainly focusing on the proletarianization of workforce and the development of various industries *per se*.

There can be two points that would catch our attention from this huge contribution of Baranovski; one of them, pointed out by John P. McKay⁸⁴, where Baranovski claims that the access to the foreign capital, access to markets and technology favoured Russian industrialization and made it possible leap much more faster than the old capitalist countries of West. McKay correctly links this insight with the Alexander Gerschenkron's 'no state initiative, no industrialization in Russia' framework which we will come soon. Secondly, as pointed out by Olga Crisp, the importance of the cottage industry and the local, rural or urban craftsmen as *kustars* and *remesleniki* turned out to be much more important than it has generally been accepted. For Baranovski not that the local craftsmen or manorial labour be in conflict with capitalist, industrial development and factory production but instead, they become a part of the mechanized factory production while these two types of production processes go hand in

⁸⁴ John P. McKay, "The Russian Factory in the Nineteenth Century. By Mikhail I. Tugan-Baranovsky, Trans. by Arthur and Claora Levin, under the Supervision of Gregory Grossman. Homewood, Ill., Richard D. Irwin, 1970. Pp. xviii + 474. \$8.75." *Business History Review* 46, no. 01 (1972): 137–39.

hand, supporting each other.⁸⁵ Therefore, he claimed that in Russia industrialization had a rural aspect along with its urban aspect and the former need not to be a transitory phase. The difference with Lenin is important: While in the former, *kustar* work and cottage industries were only transitory and counter-cyclical to the big-scale industry while in the latter, they are pro-cyclical and need not be transitory on the way of full capitalistic development. For Baranovsky, rural-urban connection could form a different type of industrialization process, different that it has exhibit in the Western case

Quantitative Works and Pessimistic Premises on Russian Industrialization

For Soviet economists to study national economy after the establishment of USSR while focusing on the different production processes in different phases as well as the development of various industries in different times. However, bringing these different aspects of historical progress of economic activity or in other words, searching for a 'synthesis' in the Russian and early Soviet History was a way too ambitious project and only has taken a new shape, starting with the 1930s thanks to the enhanced opportunities in the sphere of technical aspects i.e. Developments in statistics as well as source materials. i.e. national archives, for instance, the ones which were made available by USSR made) Although we know that the motivation was to demonstrate 'how the capitalistic production process would eventually lead to communism in the end', which proved to be wrong for now, although few of the statistical accuracy from these studies remain valid today, nevertheless, they were very impressive attempts to study the path of industrialization and the progress of capitalistic production.

⁸⁵ Olga Crisp, "Labour and Industrialization in Russia," in *Cambridge Economic History of Europe. Vol. 7: The Industrial Economies: Capital, Labour, and Enterprise (Part 2)*., ed. P. Mathias and M.M. Postan (Cambridge, 1978), 322.

P.I Liaschenko, for instance, has undertaken a wide research on the Russian economic history, which was translated into English language and published in 1949. This colossal study, covering a vast period dating back to feudal or even prehistorical times in the Russian land reaches even to the First World War and pre-Bolshevik Revolution years. It is not purely an ‘economic history’ book though since it maintains the dichotomy between the ‘economic aspects’ of the developments as well as the ‘historical’ aspects. Hence, it would not be reasonable to expect from this book to be so ‘specific’ in some aspects like the industrial development during the 19th century in Russia. Although, we must note that the author dedicated four chapters to nineteenth century economic developments and general economic structure, regarding the serf-agriculture, feudal manufacturing, the general character of industrial capitalism and the effects of the Great Reforms on the development of capitalist factory.⁸⁶

Liaschenko embraced the mainstream line regarding Russian industrialization history by accepting its ‘retarded, belated’ nature. Accordingly, the abolition of serfdom in 1861, stands as a break point and an ‘a very first step’ on the way of development of capitalism in Russia. The emancipation has been valued so highly since the accordingly, ‘feudal’ relations held the technological progress and the commercialization of agriculture, back. As a result the industrial capitalism, could not be unleashed from its chains. According to Liaschenko, was inherently maintaining the idea that industrialization and economic growth forthrightly meant the development of large-scale heavy industry. In his account, only in the after 1870s, there we could mention about a forward movement in terms of industrialization and the initiative of

⁸⁶ Liashchenko, *History of the National Economy of Russia, to the 1917 Revolution*.

“industrial promotive” via the foundation of corporations, the enhanced credit opportunities by newly established banks and the influx of foreign capital.

The following studies from other Marxist Soviet scholars like P.A. Khromov (1950)⁸⁷ and S.G. Strumilin (1966)⁸⁸ as well as ex-Soviet emigrant scholar S.N. Prokopovich (1952)⁸⁹ gave an attempt to keep up with the ‘synthesis’ approach and strived to provide the various developments within different industries while not losing connection with them. However, for our purposes, these studies, despite having a crucial place in the Soviet historiography, do not tell much because of their industry output based analysis. These studies made use of official Soviet statistics or national income accounts and undertake their analysis within a strict perspective of national industrial outputs. Many of them used ‘Kondratieff Index’⁹⁰ in order to assess the industrial development; which was simple a selected basket of the volume of industrial outputs ⁹¹

Non-Soviet literature on late Russian and early Soviet industrialization and economic growth was stemming from the same problem of using quantitative methods over extensively: Kondratieff index, again was standing as the standard tool of analysis and the spotlight was

⁸⁷ S. S. Khromov, ed., *Industrializatsiia Sovetskogo Soiuz: Novye Dokumenty, Novye Fakty, Novye Podkhody* (Moskva: In-t rossiiskoi istorii RAN, 1997).

⁸⁸ S. G. (Stanislav Gustavovich) Strumilin, *Ocherki ékonomicheskoi istorii Rossii i SSSR*. (Moskva, Nauka, 1966).

⁸⁹ S. N. Prokopovich, *Narodnoe Khoziaistvo SSSR* (Niu-Iork: Izd-vo im. Chekhova, 1952).

⁹⁰ ⁹⁰ Kondratieff Index was found and published in 1926, the Economic Bulletin of the Business Cycle Research Institute under the direction of N. D. Kondratieff.-*Ekonomicheskii bulletin*', V, No. 2 (1926), i2-20. cited by Alexander Gerschenkron, “The Rate of Growth in Russia: The Rate of Industrial Growth in Russia, Since 1885,” *The Journal of Economic History* 7 (1947): 144–74.

⁹¹ Kondratieff Index was found and published in 1926, the Economic Bulletin of the Business Cycle Research Institute under the direction of N. D. Kondratieff.-*Ekonomicheskii bulletin*', V, No. 2 (1926), i2-20. cited by *ibid*.

generally either on the working conditions or formation of the proletariat if not the industrial progress, output value or output composition, supported with time series.

With the expansion of the National Income accounting methods as well as the widening data sources created opportunities for more quantitative studies regarding Russian industrialization in the western world as well. The main reason why western scholars turned their face to Tsarist Russia is obvious if we think about the post-world war conditions and ideological setting. The foremost questions regarding Russia on the Western academic spheres was “*In what extent, Tsarist Russia was a backward country? What are the terms of this backwardness? What are reasons for the backwardness?*”

While Simon Kuznets was assessing the progressive phases of ‘modern economic growth’ by an essentially quantitative approach and providing a solid theoretical platform that would ready to be empirically tested by the help national income account based methods, Alexander Gerschenkron was exploring on late Russian economic growth. One drawback of these qualitative methods was that they would be incompatible to use for the inaccurate data dating back to 1885, as Gerschenkron himself exclusively explain.⁹²

For Gerschenkron, as much as Lenin as Liaschenko as well, serfdom stands as the main and foremost obstacle on the way industrialization.⁹³ Ironically, this was the very essential

⁹² Ibid.

⁹³ Alexander Gerschenkron, *Economic Backwardness in Historical Perspective: A Book of Essays* (Cambridge: Belknap Press of Harvard University Press, 1962).

argument of Tsarist Russian ‘belated’ industrialization in which Marxists and liberals agreed upon. Accordingly, when the factor mobilization was restricted and bound to extra-economic factors, much needed effectiveness and productivity growth was stalled and therefore, the primary sector could not release its abundant and less productive labour for the secondary sector. According to Gerschenkron, who was still on the same line with Lenin and Liaschenko, the abolition of serfdom did not immediately solve this problem.⁹⁴ In fact, it has made things only worse in the beginnings due to politically mistaken government decisions i.e. to force the ‘released serfs to pay for compensation for the land losses of the landowner indirectly as well as social institutions like the traditional village communes (obschina).⁹⁵ Generally, the land repayments, heavy taxes and dues were paid collectively by these traditional institutions and since it would be hard for the community to cover losses of human power in case of mass migration, the mobilization of peasants was still restricted. Ex-serfs were still exempt from searching for a non-agricultural employment and secondary sector was still in urgent need to labour which was scarce. Within this narrative, it was inevitable for the industrialization process to come into a halt.

Raymond Goldsmith fully agrees with Gerschenkron in some aspects on his own account regarding Tsarist Russian economic growth: Russia was an backward country where the majority of the population were living in the rural areas, agriculture was still having the highest amount of share in terms of labour force share and output, agricultural population were being stuck with the heavy burden of taxes and low productivity.⁹⁶ The only significant defining factor

⁹⁴ Gerschenkron, “The Rate of Growth in Russia,” 144.

⁹⁵ Gerschenkron, *Economic Backwardness in Historical Perspective*.

⁹⁶ Raymond W. Goldsmith, “The Economic Growth of Tsarist Russia 1860-1913,” *Economic Development and Cultural Change* 9, no. 3 (1961): 441–442.

economic growth in the period between the emancipation and the outbreak of First World War, according to Goldsmith was the rapid rise of population between 1860-1916, when 70 million population in 1860 became 170,000 in 1916⁹⁷ and in some extent, introduction of railways which has grew from 1000 miles to 40000 miles between 1860 and 1916.⁹⁸ Manufacturing and mining, however, undergo and intense growth period however when Russia came to 1913, it was still one fifth of the overall economic output while the industrial labour force was still around 5%. This development was mainly in the branches of heavy industry while machinery building industries were growing rather slowly in textiles, electric and chemical industries; many had to be brought from abroad.⁹⁹

There were some different aspects of Russia industrialization, questions which are more interested in “how?” rather than “when” and “at what extent” and that is where, Gerschenkron’s ‘twist’ - if we borrow the expression from Peter Gatrell.¹⁰⁰- From liberal view comes in: government intervention. Gerschenkron claims that it was the government, who stepped in, in order to cover the non-existent middle-class or bourgeoisie who would take entrepreneurship responsibilities. From one side, the high tariffs implemented by Financial Minister Sergei Witte, especially weighted on the low-income groups would protect the infant industry.¹⁰¹ On the other side, the huge railway construction project, especially the second wave which started after 1890, ignited heavy industry and large-scale factory work especially in some special iron, coal, metal and fuel industries and gave the way of industrialization in a fuller sense. After this initial

⁹⁷ Goldsmith, “The Economic Growth of Tsarist Russia 1860-1913.”

⁹⁸ Ibid.444.

⁹⁹ Ibid. 442.

¹⁰⁰Peter Gatrell, *The Tsarist Economy, 1850-1917* (New York: St. Martin’s Press, 1986) 142.

¹⁰¹Gatrell, *The Tsarist Economy, 1850-1917*.

momentum, Gerschenkron claims, government would put a step aside after 1905 and let the newly established commercial banks as well as other credit institutions as well as foreign capital to have drivers' seat.

There were many objections from many sides to Gerschenkron as well in his definitive contribution to the Russian economic history. Arcadius Kahan, for instance, claimed that just on the contrary of that Gerschenkron have suggested, a strong state dominance within the industrial production, let alone induced hindered industrialization and economic growth severely. Actually, for Kahan, this 'state-induced economic growth' was deep rooted in Russian history, doing back to even 18th century where the state and nobles cooperated and did not let bourgeoisie to grow.¹⁰²

Mark Harrison, agrees to Kahan in the sense that government industrialization initiatives could not be rendered as the main source of growth. Harrison reminds that the presupposed link between the government initiatives between 1880 and 1890s and presupposed deterioration the life standards of peasantry is dubious meanwhile 1906 consumer-led industrial growth cannot be as a result of government policies.¹⁰³ The government did not change any significant policy at all despite the turn of the century and it did not contribute to the capital formation in any

¹⁰² Arcadius Kahan, "The Costs of 'Westernization' in Russia: The Gentry and the Economy in the Eighteenth Century," *Slavic Review* 25, no. 1 (1966): 40–66.

¹⁰³ Mark Harrison, "The Peasantry and Industrialization," in *From Tsarism to the New Economic Policy: Continuity and Change in the Economy of the USSR* (Ithaca, NY: Cornell University Press, 1991), 105.

other ways than rail road construction. ¹⁰⁴For Harrison, unlike Gerschenkron and like Kahan, industrialization and economic growth was not due to well-advised government actions.

For nearly all studies and scholars that we have mentioned above, presumed that at the turn of the century, Russian agriculture was suffering from crisis. While low productivity makes hard for peasantry to earn their living, harsh taxes induced by the government were not helping. The mobilization of the peasants was also limited and this was hindering the Tsarist Russia to attain capitalist economic growth. This ‘agrarian crisis’ perspective was to be attacked from many sides and many ways.

As well as the whole world, Russia has suffered from economic crisis between 1900-1903 and 1904-1908. There were many ideas discussed on the possible reasons of this crisis. Liaschenko for instance, suggested that this was a result of the very essence of Russian way of industrialization: too much injection for some specific industries like coal, fuel or metallurgy would create such a crisis tendency due to overload.¹⁰⁵ Khromov suggested similar reasons while he was adding that the tax paying capacity of the peasantry was depleted and there was a ‘lack of demand’ because of this.¹⁰⁶ For Gerschenkron, the problem was stemming from the institutional barriers: the village communes held released ex-serfs back from migrating into

¹⁰⁴ Harrison, “From Tsarism to the New Economic Policy.”

¹⁰⁵ Liashchenko, *History of the National Economy of Russia, to the 1917 Revolution*, 648–649.

¹⁰⁶ Khromov, *Industrializatsiia Sovetskogo Soiuz*, 405–406; cited by Thomas Stanley Fedor, *Patterns of Urban Growth in the Russian Empire during the Nineteenth Century*, Research Paper - University of Chicago Dept. of Geography ; No. 163 (Chicago: University of Chicago Dept. of Geography, 1975), 106.

cities permanently and hence they were failing to integrate themselves into capitalistic relations and form a capitalistic market.

Paul Gregory and the Optimistic Turn

These explanations had their limitations in themselves and many objections came from various sides, starting from 1970s. Paul Gregory, for instance, revisited this ‘Late Tsarist Russian Economic Growth’ conundrum by the same methodological framework, which was developed earlier by Kuznets: the modern economic growth. Exploring through the National Income Accounts of Russia while as his deciding on ‘selective’ unit of analysis, he contributed to the literature by a few tweaks and adjustments on the widely used Kondratiev index. When compared his results with the earlier ones, like S.N. Prokopovich, V.E. Varzar, Raymond Goldsmith and Malcolm Falkus his study has reached slightly different and more ‘optimistic’ accounts for Imperial Russia from 1860 to 1913, especially in the second part, the years between 1885 and 1913.¹⁰⁷

Despite the relatively more optimistic scheme of Russia, Gregory shares the opinion that Russia is still far away from being classified as a country which has undergone good transformation and ‘modern economic growth’ in the sense of Kuznets.¹⁰⁸ Gregory analyzed Russian structural

¹⁰⁷ Paul R. Gregory, *Russian National Income, 1885-1913* (Cambridge [Cambridgeshire]; New York: Cambridge University Press, 1982), 418–425.

¹⁰⁸ Gregory, Paul. “Economic Growth and Structural Change in Tsarist Russia: A Case of Modern Economic Growth?” *Soviet Studies* 23, no. 3 (1972): 418–34.

transformation in the framework of Simon Kuznets' 'Modern Growth' concept and left the case indeterminate. Gregory, recalling from Kuznets that in order to label a case as 'Modern Economic Growth', there needs some certain conditions to be fulfilled. For instance, in a typical case of modern growth in the sense of Kuznets' work, agricultural output and labour shares in while the share of secondary sector activities like manufacturing outputs should rise as well. Along with that, for the initial phases, no relevant changes in the shares of the service sector would be expected but while moving on the 'modern growth' path, labour force share of service sector was to be increased.¹⁰⁹

Working on the Russian country level and while utilizing National Income Accounting methods, Gregory finds evidence that between 1880-1913, the expected downfall of the agricultural share in the workforce has not been fulfilled in the given context. According to his account, the labour force share of agriculture in Russia in 1913 was somewhere close to relevant shares of some modern industries in their pre-modern times. Moreover, labour force share of service industries failed to rise; in fact, it has been declined. He also notes that it was the manufacturing which increased its labour force share by %50, which sucked the labour force shares that would belong to service industries of Modern Economic Growth was taking place but nevertheless, the relevant manufacturing rates were still behind modern industry countries. These were an only part of the relevant criteria which were the most relevant ones for our study and Gregory continues his research with a few more comparative analysis. His final verdict was: although there is lack of data sources and limited research raw material to undertake a quantitative analysis, under the given circumstances, there was not enough evidence to label

¹⁰⁹ *ibid.*

Russian industrialization between 1880-1913 as a 'Modern Economic Growth' in the sense of Kuznets' work.¹¹⁰

Peter Gatrell notes that these earlier estimates of Goldsmith, Gregory or Kahan could no longer be accepted as accurate estimates, but we can safely assume that during the last quarter of 19th century, Russian industrial production have risen by %5 while the labour force by %3 which hints to an industrial growth. The composition of output has much changed and it is no longer mining and metallurgy but instead, the consumer goods were having a remarkably high share.¹¹¹ He claims that by 1913, textiles and foodstuff accounted for 1/3 of the whole industrial output. This was twice of mining metallurgy and engineering combined. In his words: "*the history of industrialization in Russia was not synonymous with the growth of heavy industry.*"

In addition to Gatrell's comments on these estimates including the estimate of Gregory, the latest revisit in line with the same conclusion that 'agrarian crisis' proponents could be taken as British economic historian Robert Allen where he re-evaluated Gregory's findings and reached the conclusion that his accounts were 'too optimistic'.¹¹²

¹¹⁰ Paul Gregory, "Economic Growth and Structural Change in Tsarist Russia: A Case of Modern Economic Growth?" *Soviet Studies* 23, no. 3 (1972): 432.

¹¹¹ Olga Crisp, *Studies in the Russian Economy before 1914*, Studies in Russian and East European History (London: Macmillan ; the School of Slavonic and East European Studies, University of London, 1976), 42–43; cited by Gregory, "Economic Growth and Structural Change in Tsarist Russia," 144.

¹¹² Robert C. Allen, *Farm to Factory: A Reinterpretation of the Soviet Industrial Revolution*, The Princeton Economic History of the Western World (Princeton, NJ ; Oxford, Eng: Princeton University Press, 2003).

There have been other quantitative approaches as well; for instance Olga Crisp was not quite satisfied with this by ‘the weak consumer demand of the peasantry due to heavy taxes’ explanation for the 1900-1903 and 1904-1908 crisis years, while underlying the relative successes of different industries other than metallurgy, like sugar or cotton textiles.¹¹³

For Harrison, it was the agriculture actually ‘paid the price’ for the development of industrial sector via ‘unequal transactions’ instead of governmental transfers. This would mean the rural peasantry has transformed itself into the newly developing conditions, i.e. a rising demand from urbanized city populations and government army, in terms of production and exchange. The peasantry have provided the food that urban population would need and in exchange, they had their manufacturing goods, albeit with a higher price. Agricultural production both helped urban population as well as army feed themselves Therefore, he concludes that the peasantry and the agricultural contribution to the economic growth was not by the means of government transfers as Gerschenkron supposes but instead, by the means of unequal exchange between the peasantry and the urban classes.¹¹⁴

This last point, underlined by Harrison, implies for a different understanding of agricultural crisis where the peasantry was supposed to have a much more flexible type of relation with capitalistic markets and let alone suffering from a deep crisis which would leave them in tatters, they managed to induce economic growth by finding various solutions against the institutional problems hovering around them. It could even inferred from this insight that serfdom was not

¹¹³ Gatrell, *The Tsarist Economy, 1850-1917*, 142.

¹¹⁴ Harrison, “From Tsarism to the New Economic Policy,” 124.

contradictory with capitalistic market, commercialized agriculture and overall, economic growth. This could lead us a wider meaning of industrialization.

Throughout 1980s even until today there have been many studies on this ‘agrarian crisis’ aspect of the Russian industrialization. James Simms argued that the foundations of this ‘agrarian crisis’ discussion is ‘not only arguable but also fallacious.’¹¹⁵ For him, we could not really talk about a downturn in economy in general and the living standards of the peasantry were not as bad as once taken as a fact.¹¹⁶ From the same vein, Steven Hoch looked into demographic structure during the late imperial era and claimed that the relevant standards of life around Petrovskoe estate in Tambov gubernia were something similar to some parts in preindustrial Europe.¹¹⁷ Regarding this aspect, Boris Mironov has made a ground-breaking work with new data and reasserted that the life standards of late Tsarist Russia were not as catastrophic as have been depicted earlier.¹¹⁸ More recently, Steven Nafziger, who made use of micro-level household data collected from zemstvo records from Moscow and St. Petersburg provinces focused on traditional Russian agricultural institutions like land communes, found the evidence that in fact, these traditional institutions were not a hindrance on labour mobilization or the supposedly restraining and impoverishing tax obligations and redemption payments were not ‘too much’ restraining according to and in some cases.¹¹⁹ Concentrating more on regional

¹¹⁵ Simms, “The Crisis in Russian Agriculture at the End of the Nineteenth Century: A Different View,” *Slavic Review* 36, no. 3 (1977): 378.

¹¹⁶ *Ibid.* 397.

¹¹⁷ Steven L. Hoch, “Serfs in Imperial Russia: Demographic Insights,” *Journal of Interdisciplinary History*, 1982, 242.

¹¹⁸ Boris Mironov, *Standard of Living and Revolutions in Imperial Russia, 1700-1917* (Routledge, 2012).

¹¹⁹ Steven Nafziger, “Communal Institutions, Resource Allocation, and Russian Economic Development: 1861–1905,” *The Journal of Economic History* 68, no. 02 (2008): 570–75; Steven Nafziger, “Peasant Communes and Factor Markets in Late Nineteenth-Century Russia,” *Explorations in Economic History* 47, no. 4 (2010): 381–402;

micro-based data on Moscow and Nizhny Novgorod, the studies of Tracey Dennison¹²⁰ Catherine Evtuhov¹²¹ has supported the conclusions of Nafziger as well.

Industrialization and Urbanization in Late Tsarist Russia.

Until now we have mapped out a general summary of the earlier studies regarding Russian industrialization with various aspects: assessment of industrialization via quantitative methods, the peasantry and the agrarian crises, the life standards. Yet we have another aspect to cover which is much relevant to our study, since we have chosen cities as a unit of analysis: the industrialization and urbanization.

Interestingly, studies on urbanization and more specifically, the relation between urbanization and industrialization in late Tsarist and early Soviet Russia has not been as wide as other aspects. Once we again, we must recall that in this project, we need to revisit the urbanization-industrialization relationship within the context of Russia.

According to orthodox understanding of urbanization-industrialization nexus, the latter should lead the latter directly. This is because, since industrialization would mean mechanized large-scale factory production in the narrowest sense, only high productivity and effectiveness in

Steven Nafziger, "Serfdom, Emancipation, and Off-Farm Labour Mobility in Tsarist Russia," *Economic History of Developing Regions* 27, no. 1 (2012): 1–37.

¹²⁰Tracy Dennison and Steven Nafziger, "Living Standards in Nineteenth-Century Russia," *The Journal of Interdisciplinary History* 43, no. 3 (2013): 397–441.

¹²¹Catherine Evtuhov, *Portrait of a Russian Province : Economy, Society, and Civilization in Nineteenth-Century Nizhnii Novgorod*, Series in Russian and East European Studies (Pittsburgh, Pa: University of Pittsburgh Press, 2011).

the agriculture would induce such a process. The surplus labour that would be released from agricultural production would need to force themselves into manufacturing and other derivate type of production processes that we could call secondary sector which were to be undertaken in the urban centres. It goes without saying that the whole process would induce further urbanization since after a while, newly established urban centres would become important transportation, communication and all kinds of service related, tertiary active hubs, where they would create a vast-urban based demand. Our question in mind was, should this process has to follow the same way in each and every national, regional or city-level setting.

Robert A. Lewis, Richard H. Rowland, Ralph Clem and J.W Leasure were the first among Western scholars to draw the interest on the demographics, such as population changes, migration, and industrialization-urbanization relation in Russian setting, on a territory or gubernia level analysis.

In their study on urbanization in Russia between 1897 and 1966, Lewis and Rowland made use of in four different all-Russian census data: 1897, 1926, 1939 and 1959 in order to come up with a comprehensive urbanization analysis on the territorial level.¹²² They came to the conclusion that before the 19th century, urbanization was almost negligible and only in St. Petersburg and Moscow there were a population more than 50,000 ¹²³ their principal conclusion for our purposes was that in between 1897-1926 due to excessive turmoil and political instability, one could not claim that urbanization was ‘very’ closely related with

¹²² Robert A. Lewis and Richard H. Rowland, “Urbanization in Russia and the Ussr: 1897-1966,” *Annals of the Association of American Geographers* 59, no. 4 (December 1969): 776–96.

¹²³ *Ibid.* 780.

industrialization.¹²⁴The authors kept the echoes of Gerschenkron while claiming that the strong industrialization impulse that the Tsarist state has provided during the late nineties of the 19th century was not reflected in the urbanization rates. According to authors, the increasing rate of urbanization during the 1897-1926 term was rather triggered primarily by enhanced transportation possibilities, as a by factor, in-migration. The nexus between industrialization and urbanization was weak between 1897 and 1926 would only to be established towards to end of thirties only to become stronger until late sixties.¹²⁵

There were a few good reference sources that we have utilized for this study regarding urban growth in Tsarist Russia within different periods, with a national, regional and city-level analysis. One of the main source as such was “*Patterns of urban growth in the Russian Empire during the Nineteenth Century*” by Thomas Stanley Fedor.¹²⁶ Fedor, to some extent, utilized A.G. Rashin’s notorious book on the population growth between 1810 and 1910 in the Tsarist Russia¹²⁷ and maintained a specific interest on the urban growth.

During the 70s, the urban setting in Russia and its connection with the population living in rural settlements has been analysed beyond a statistical perspective. Despite the fact that mostly, it was the largest urban centres, namely Moscow¹²⁸ and St. Petersburg¹²⁹ was in focus, more

¹²⁴ Ibid. 791.

¹²⁵ Ibid. 796.

¹²⁶ Fedor, *Patterns of Urban Growth in the Russian Empire during the Nineteenth Century*.

¹²⁷ Adol’f Grigor’evich Rashin, *Naselenie Rossii za 100 let, 1811-1913 gg.; statisticheskie ocherki*. (Moskva, Gosstatisticheskoe izd-vo, 1956).

¹²⁸ Joseph Bradley, *Muzhik and Muscovite: Urbanization in Late Imperial Russia* (Univ of California Press, 1985).

¹²⁹ James H. Bater, *St Petersburg: Industrialization and Change*, Studies in Urban History 4 (Montreal: McGill-Queen’s University Press, 1976).

general accounts were also available, covering other big cities like Odessa, Riga or Warsaw.¹³⁰ These studies were mostly focusing on the rural-urban migration; in what ways did the immigrations adopted into the urban setting, in which conditions did they survive, how far did they keep their lines with former rural settlements and how did the urban settlers receive these influx of people who were coming from largely urban setting.¹³¹ The industrialization-urbanization nexus were not in the central focus or was not analysed within an economic history framework.

One another important study from Henry Bator came late, on the urbanization-industrialization connection among the peripheral, not central town and cities in Russia.¹³² Bator came to the conclusion that it would be hard to generalize the case for the whole Russia. The supposed connection between industrialization and urbanization for the whole country turns out to be very different within different provincial urban settings. He claimed that it would be expected to observe a relatively more stable economic and demographic setting the provincial cities in the general sense; which means industrialization and urbanization go hand in hand in larger, central cities (like St. Peterburg or Moscow) while in provincial cities, no industrialization, there is no urbanization as well. However, surprisingly, there were also some cases which would revert this claim: There were some provincial cities which turned out to more sensitive to external impulses, especially those which are coming from nearby larger cities; a more transitional population and a more fragile economy.¹³³ Standing as a provincial city does not guarantee that no industrialization or urbanization would take place;

¹³⁰ Michael F. Hamm, *The City in Russian History* (Lexington: University Press of Kentucky, 1976).

¹³¹ Daniel R. Brower, *The Russian City Between Tradition and Modernity, 1850-1900* (University of California Press, 1990).

¹³² James H. Bator, "Urban Industrialization in the Provincial Towns of Late Imperial Russia," *The Carl Beck Papers in Russian and East European Studies*, no. 503 (1985): 24.

¹³³Ibid. 39.

As a result of this brief literature review on the rural-urban nexus, if we would like to draw some conclusions for our own purposes, here they are: the Russian urbanization experience was not something similar to the urbanization process that the West has undergone. In the West, cities rose as a result of economic activity and functioned like a commercial centre of attraction thanks to a strong bourgeoisie who took entrepreneurial initiatives which further attracted industrialization. In Russian context however, the bourgeoisie was always kept in check by nobles-peasantry-state triangle; they had never become a politically powerful class.¹³⁴ The industrial production, i.e. manufacturing centres, cotton printing workshops or the factories were generally not placed in the urban centres but on the contrary, dispersed among the rural areas. Therefore in Tsarist Russia urbanization-industrialization nexus does not need to generalize as one certain case; the connection is multifaceted and needs to be further analysed with further quantitative methods.

Up to this point, we have summarized the main lines of literature on Russian industrialization and its various aspects. The next task is to share our results obtained from the city level analysis on occupational information and to check whether it would be possible for us to infer a different view of Russian industrialization experience.

¹³⁴ Richard Pipes, "The Missing Bourgeoisie," in *Russia under the Old Regime*, History of Civilisation (London: Weidenfeld and Nicolson, 1974, 1974), 191–218.

Occupational Transformation in Ivanovo: 1897-1926

General Facts: Ivanovo

Ivanovo-Voznesensk, was a town originally known as Ivanovo and named after two towns across the river, Ivanovo and Voznesensk. The two small districts were administratively brought together in 1871 by Alexander II, due to the rising commercial and economic importance of the settlement. The city was placed in Shueia uezd, within Vladimir Province, Central Industrial Region of Tsarist Russia. Today, the city is again, known as Ivanovo. ¹³⁵

Historically, Central Industrial Region was known for its low level of agricultural possibilities, due to poor soil quality and weather conditions. However, on the other hand, the population was dense and the water transportation possibilities were relatively rich compared to other regions of Russia. Under these circumstances, within the region, exchange, commerce and trade was more widely common and developed. ¹³⁶

In connection with the low agricultural possibilities, Central Industrial Region has been known as heavily dominated by obrok system in terms of manorial farming under serfdom. ¹³⁷ This peculiar method of agricultural labour exploitation and organization of manorial farming had its own purpose: unlike barschina, it was not only based on exploitation of peasantry upon

¹³⁵ Susan M. Vorderer, "Urbanization and Industrialization in Late Imperial Russia: Ivanovo-Voznesensk, 1880-1914" (Unpublished Ph.D. Thesis, Boston College, 1990), 56.

¹³⁶ Gilbert Rozman, *Urban Networks in Russia, 1750-1800, and Premodern Periodization* (Princeton, N.J: Princeton University Press, 1976), 159.

¹³⁷ Boris B. Gorshkov, "Serfs on the Move: Peasant Seasonal Migration in Pre-Reform Russia, 1800-61," *Kritika: Explorations in Russian and Eurasian History* 1, no. 4 (2000): 632.

agricultural production. Instead, under the obrok system, it was an obligation for the peasant to pay an amount as a compensation to his given land allotment and this could be in kind or via money. Therefore, whenever agricultural production is not very effective and low quality, it would be impossible for the peasant to survive with only doing subsistence farming. ¹³⁸

Vladimir was one of the most populous and industrially developed gubernias (provinces) within the Central Industrial Region. Vladimir province industry experienced energetic and persistent competition from other areas in the Russian Empire. By 1910, the number of looms and amount of cloth produced in Vladimir occupied first place among all Russian provinces, and the number of spindles here was second to Moscow. ¹³⁹

Ivanovo, despite not being an administrative centre, was almost unofficial capital of the Vladimir region, containing most of the industrial production bases as well as the population. It has been known as the 'Russian Manchester' due to its vast capacity and traditionally having a huge share of textiles, clothing and printing industries. ¹⁴⁰

Some specific factors were playing an important role behind this dominance. For Ivanovo, before the railway initiative of the Tsarist government, the biggest export opportunity of the products of Ivanovo was the Nizhny Novgorod fair since the city was a reliable river network

¹³⁸ Liashchenko, *History of the National Economy of Russia, to the 1917 Revolution*, 315.

¹³⁹ K. A. Pazhitnov, *Ocherki istorii tekstil'noi promyshlennosti dorevoliutsionnoi Rossii; sherstianaia promyshlennost'*. (Moskva, Izd-vo Akademii nauk SSSR, 1955), 38–39, 55–56; cited by William L. Blackwell, *The Beginnings of Russian Industrialization, 1800-1860* (Princeton, N.J.: Princeton University Press, 1968), 116.

¹⁴⁰ Pavel Mikhailovich Ékzempliarskiĭ and M. M. [from old catalog] Biziaeva, "Istoriia goroda Ivanova" (Ivanovo: Ivanovskoe knizhnoe izd-vo, 1958), 79.

through Uvod and Talka rivers. Most of the commodities that were sold in this fair was coming from Ivanovo. It was the river network and transportation opportunities that made Ivanovo advantageous to reach Nizhny Novgorod fair and hence, a more commercialized economy. ¹⁴¹

Different than other big cities as well as manufacturing centres like St. Petersburg and Moscow, Ivanovo was a little more affordable, easy to reach and to survive. This factor also played a role for the migrants, especially from other near Central Industrial region gubernias to get more inclined to go for otkod and choose Ivanovo as a destination. It would not be a totally right conclusion to claim that the abolishment of serfdom has turned Ivanovo into a manufacturing centre due to in-migration but this institutional change aggravated the already ongoing process: *“The peasant demand for outside sources of cash income was only exacerbated by the abolition of serfdom in 1861”* ¹⁴²

Results and Analysis: Ivanovo 1897-1926

Our next task would be, based on this prior historical insight, track the population progress and the transformation of the occupational structure in the city of Ivanovo between 1897 and 1926. This the task would be fulfilled from three different aspects; the population progress, the sectoral occupational transformation and the Sub-sectoral occupational transformation. Sub-sectoral occupation transformation has two branches; secondary Sub-sectoral occupational allocation and tertiary Sub-sectoral occupational allocation. Each sub-section includes tables

¹⁴¹ Vorderer, “Urbanization and Industrialization in Late Imperial Russia,” 114.

¹⁴² Jeffrey Burds, *Peasant Dreams & Market Politics: Labor Migration and the Russian Village, 1861-1905*, Pitt Series in Russian and East European Studies (Pittsburgh, Pa: University of Pittsburgh Press, 1998), 19.

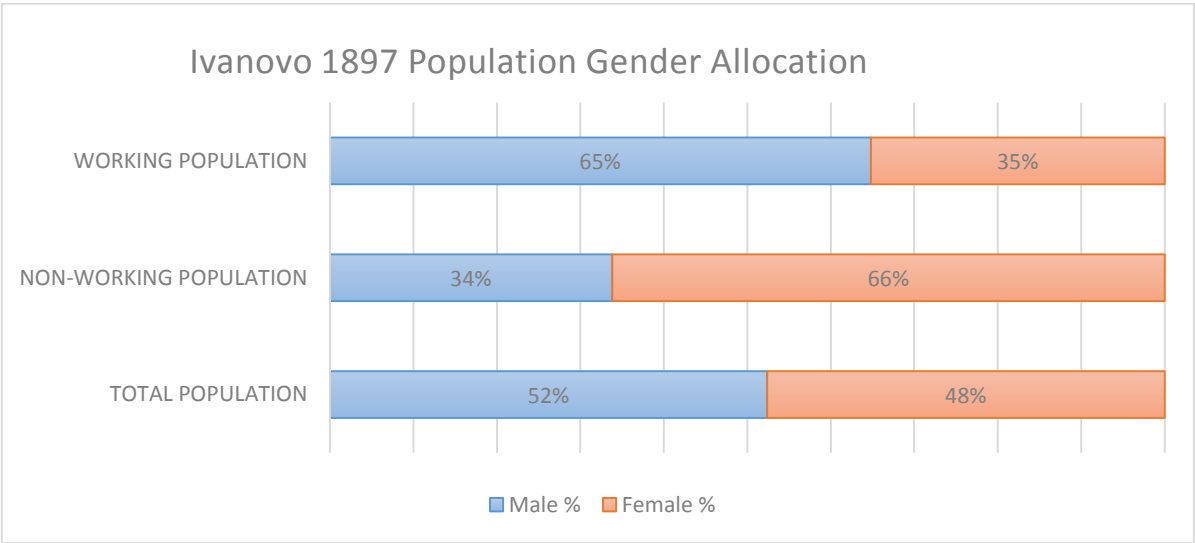
and charts on both total population as well as working population level. ¹⁴³At the end of each sub-section, there are the summary of charts where the relevant picture has been briefly reviewed and at the end of subsection ‘Occupational Transformation in Ivanovo: 1897-1926’, there is a discussion section where figures and trends were further elaborated, as well as in the verdict part, conclusory remarks has been made.

Population Change in Ivanovo: 1897-1926

Table 4-Ivanovo 1897 Population Gender Allocation

1897 IVANOVO(numbers, shares)	MALE	FEMALE	BOTH	MALE	FEMALE	BOTH	1897 IVANOVO	MALE	FEMALE
WORKING POPULATION	21069	11441	32510	74%	44%	60%	WORKING POPULATION	65%	35%
NON-WORKING POPULATION	7338	14360	21698	26%	56%	40%	NON-WORKING POPULATION	34%	66%
TOTAL POPULATION	28407	25801	54208	100%	100%	100%	TOTAL POPULATION	52%	48%

Chart 1-Ivanovo 1897 Population Gender Allocation

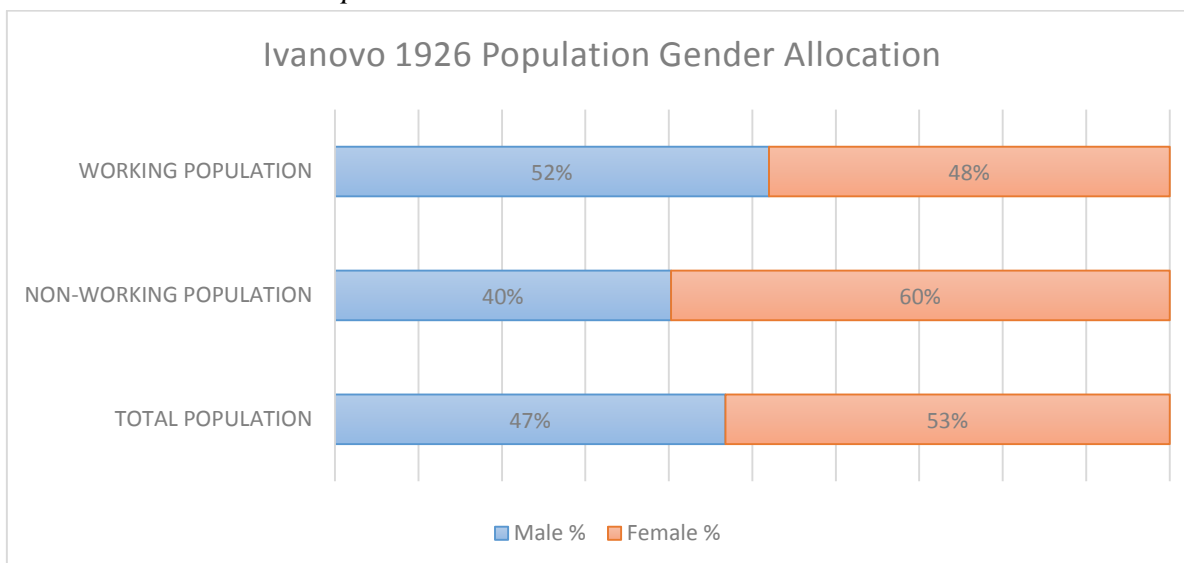


¹⁴³ Among the titles within the tables and charts, the ones which were written in capital letters, stand as a PSTI first digit occupational sector and these are composed of Sub-sectoral occupational titles which were written in lowercase. The only exception is the ‘working population’, ‘non-working population’, ‘secotrally unspecific’ and ‘without occupation or unstated’ which were written always in capital letters in order to make them easy to track. Regarding 1926 Census data, there are two sub-titles under ‘without occupation or unstated’: ‘unemployment’ and ‘unstated’. However, since 1897 census data was not available for PSTI for such coding regarding ‘without occupation or unstated’ most of the comparison would be made on the ‘without occupation or unstated’ level and not with ‘unemployment’ and ‘unstated’ breakdown. Regarding the charts and tables, ‘%’ signifies for percentage and ‘#’ signifies for real numbers.

Table 5-Ivanovo 1926 Population Gender Allocation

1926 IVANOVO (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE #	FEMALE #	BOTH #	1926 IVANOVO	MALE %	FEMALE %
WORKING POPULATION	32049	29571	61620	62%	50%	55%	WORKING POPULATION	52%	48%
NON-WORKING POPULATION	20034	29705	49739	38%	50%	45%	NON-WORKING POPULATION	40%	60%
TOTAL POPULATION	52083	59276	111359	100%	100%	100%	TOTAL POPULATION	47%	53%

Chart 2- Ivanovo 1926 Population Gender Allocation



General Outlook: Ivanovo Population Change between 1897-1926

Table 6-Ivanovo 1897-1926 Population Growth Rates

1897-1926 IVANOVO(#numbers, % shares)	MALE #	FEMALE#	BOTH#	MALE#	FEMALE#	BOTH#	1897-1926 IVANOVO CHANGE (1897=1000)	MALE %	FEMALE %	BOTH %
WORKING POPULATION	21069	11441	32510	32049	29571	61620	Working Population	52%	158%	90%
NON-WORKING POPULATION	7338	14360	21698	20034	29705	49739	Non-Working Population	173%	107%	129%
TOTAL POPULATION	28407	25801	54208	52083	59276	111359	Total Population	83%	130%	105%
LABOR PARTICIPATION RATES	74%	44%	60%	62%	50%	55%	Labor Participation Rates	-13%	6%	-5%

Chart 3-Ivanovo 1897-1926 Male Population-Labor Participation Rates

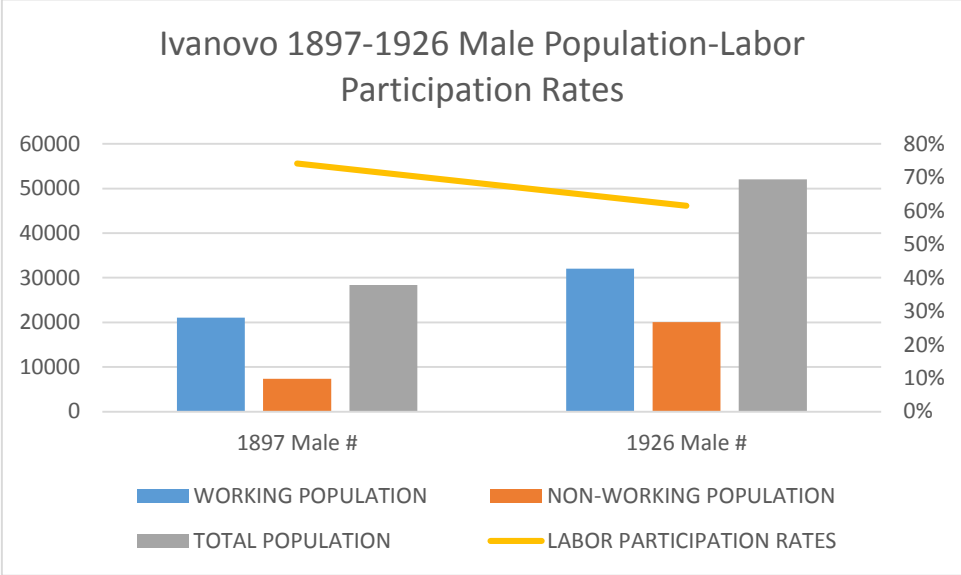


Chart 4- Ivanovo 1897-1926 Female Population-Labor Participation Rates

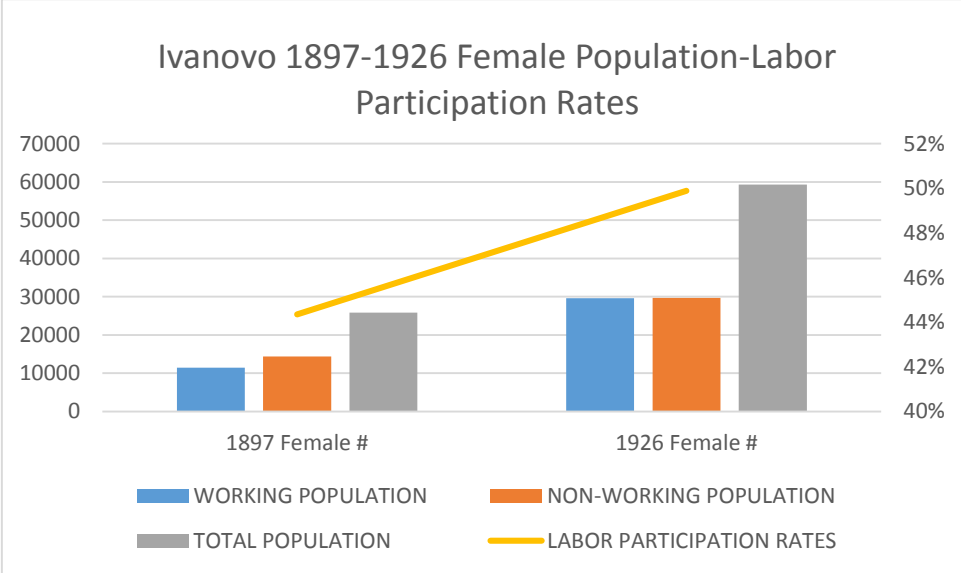
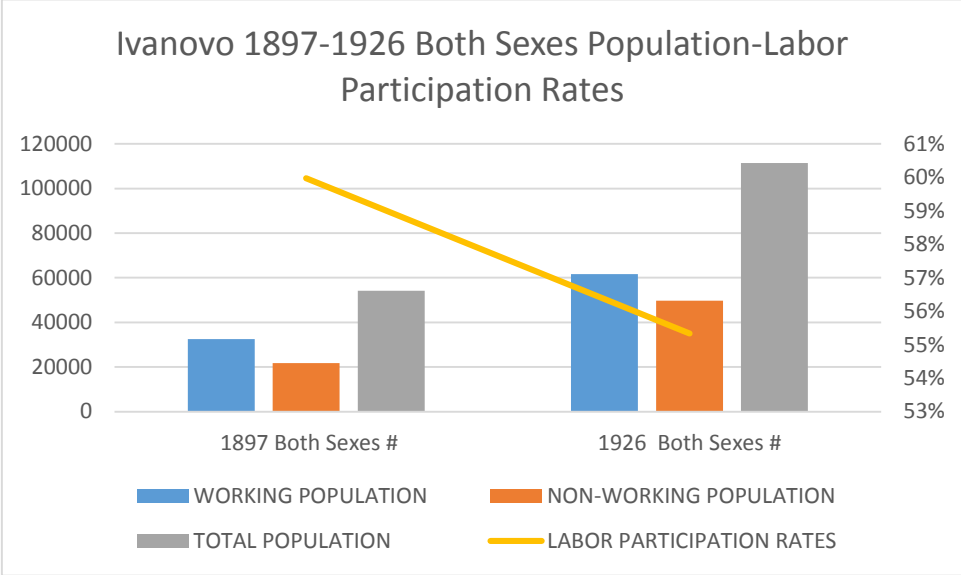


Chart 5- Ivanovo 1897-1926 Both Sexes Population-Labor Participation Rates



Summary of Charts: 1897-1926 Ivanovo Population Change

In 1897, the total population of Ivanovo was 54208 while 60% of this population were recorded as having an occupational title in the census registers. (This could be also labelled as labour participation rate). Labour participation rate is much higher for males (%74) than females (%44) Male population consists %65 of all working population whereas male-female ratio in Ivanovo, in 1897 is 52%-48%.

This high rate of male/female ratios among the total population signifies that despite the high rate of in-migration to the city, Ivanovo resembles to have a ‘capital’ experience like Moscow or St. Petersburg, since these two had huge amounts of in-migrations and since most of these newcomers were males, the sex ratio was turned in favour of them. Such a case, in 1897 could not be observed in Ivanovo. This issue would be discussed at the end of the subsection: “Occupational Transformation in Ivanovo: 1897-1926”

In 1926, the total population of Ivanovo reaches to 11359 meanwhile, the rate of working population falls down to %58. Labour participation rate among males has fallen to %66 whereas for females, it has risen to %51. The gender balance in the working population is still in favour of males (%53 to %47) but in total population, females have become the dominant gender. (%53 to %47)

In summary, from 1897 to 1926, both total and working population for both sexes rose significantly (almost doubled) but for females, this growth was with a higher rate. As a result, regarding total population, Ivanovo has turned into a female dominated city meanwhile, regarding working population, it is city male-dominated but it has become much egalitarian in terms of gender allocation.

Sectoral Occupational Transformation in Ivanovo: 1897-1926

In this subsection, I would like to present my results obtained from occupational transformation analysis in the city of Ivanovo between 1897 and 1926; with PSTI system as an occupational classification tool and 1897, 1926 census records as data sources.

Table 7-Ivanovo 1897 Total Population Sectoral Occupational Allocation

1897 IVANOVO (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	251	34	285	1%	0%	1%
SECONDARY	15590	7846	23436	55%	30%	43%
TERTIARY SELLERS	826	157	983	3%	1%	2%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	2706	2736	5442	10%	11%	10%
TRANSPORT AND COMMUNICATIONS	781	9	790	3%	0%	1%
SECTORALLY UNSPECIFIED OCCUPATIONS	568	93	661	2%	0%	1%
WITHOUT OCCUPATION OR UNSTATED	347	566	913	1%	2%	2%
WORKING POPULATION	21069	11441	32510	74%	44%	60%
NON-WORKING POPULATION	7338	14360	21698	26%	56%	40%
TOTAL POPULATION	28407	25801	54208	100%	100%	100%

Chart 6- Ivanovo 1897 Total Population, Sectoral Occupational Allocation

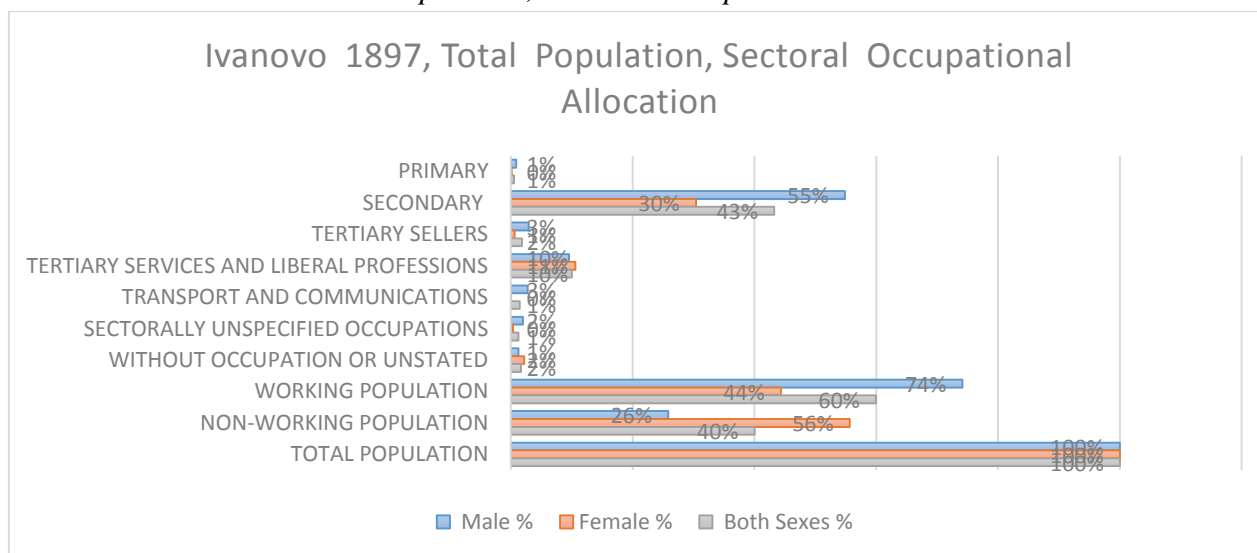


Table 8- Ivanovo 1897 Working Population, Sectoral Occupational Allocation

1897 IVANOVO (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	251	34	285	1%	0%	1%
SECONDARY	15590	7846	23436	74%	69%	72%
TERTIARY SELLERS	826	157	983	4%	1%	3%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	2706	2736	5442	13%	24%	17%

TRANSPORT AND COMMUNICATIONS	781	9	790	4%	0%	2%
SECTORALLY UNSPECIFIED OCCUPATIONS	568	93	661	3%	1%	2%
WITHOUT OCCUPATION OR UNSTATED	347	566	913	2%	5%	3%
WORKING POPULATION	21069	11441	32510	100%	100%	100%

Chart 7- Ivanovo 1897 Working Population, Sectoral Occupational Allocation

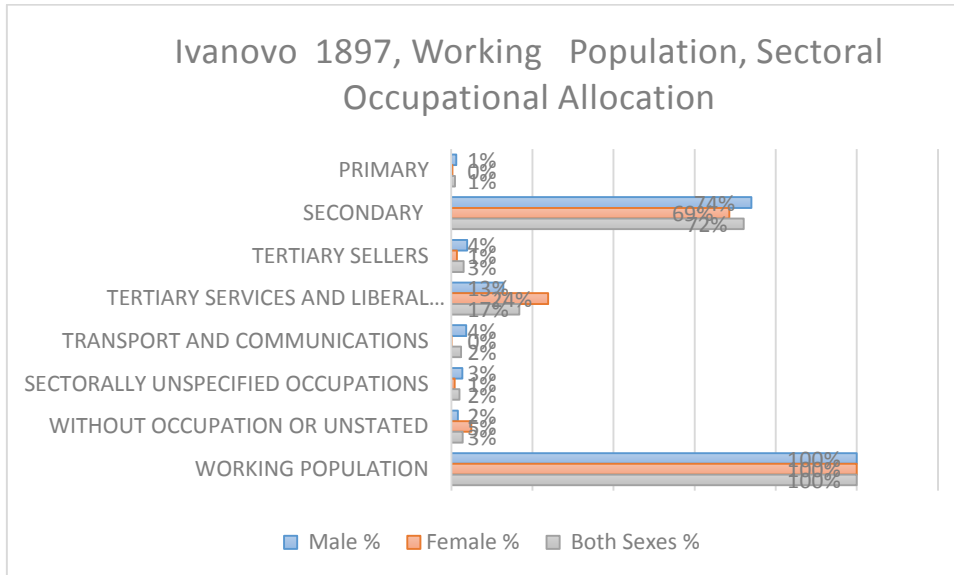
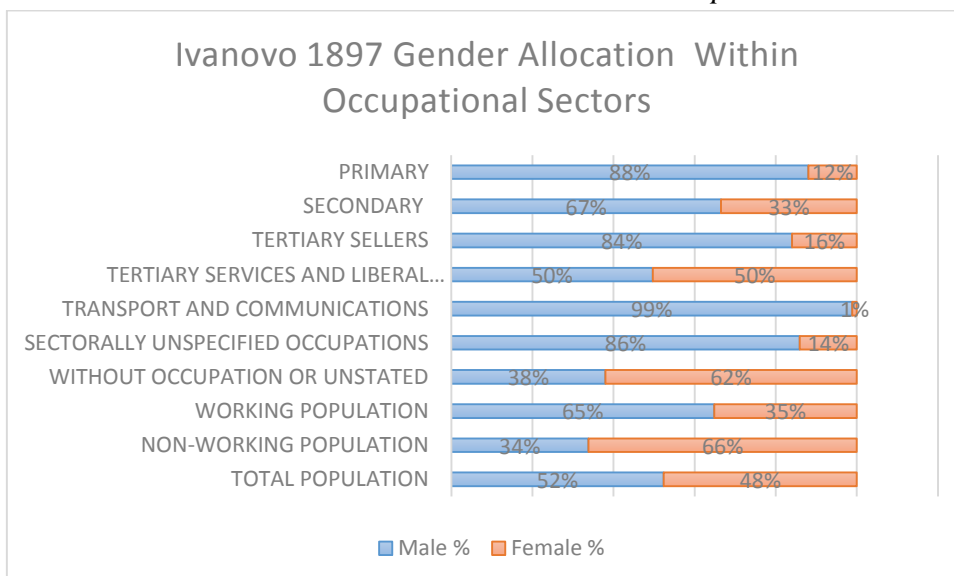


Chart 8-Ivanovo 1897 Gender Allocations within Occupational Sectors



Summary of Charts: Ivanovo 1897, Sectoral Occupational Allocation

According to the 1897 Census records, overall, Ivanovo had a secondary sector dominated occupational structure. This picture is quite clear when we look at the sectoral distribution of male total population, whereas %55 of them recorded as having an occupational title within secondary sector whereas %30 of all females were recorded as having an occupation within secondary sector. Tertiary sector and liberal professions, for both sexes, comes second with a rate around %10. Overall, slightly less than half of Ivanovo total population (%43) is engaged in secondary sector activities. Among working population, the high percentage of concentration on secondary sector is more clearly indicated while %72 of working population has been registered as such.

Primary sector is almost non-existent among the working population while tertiary sector, led by female concentration, accounts of %17 of working population when both sexes considered. When we look from the gender perspective to Ivanovo occupational structure, male presence in the working population is easily depicted. %65 of working population is male while in the leading secondary sector, the ratio appears to be as high as 67%-33%. However, regarding tertiary services and liberal professions, gender allocation is more evenly balanced. While for both sexes, primary sector does not stand as a prominent occupational sector, we must notice that very few female persons when compared to males, were registered under primary sector. Given the fact that males are slightly larger than females in gender breakdown of total population, this dramatically low share of female presence in primary sector signifies for a methodological peculiarity in the census taking process.

Table 9- Ivanovo 1926 Total Population, Sectoral Occupational Allocation

IVANOVO 1926 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	500	294	794	1%	0%	1%
SECONDARY	10607	12832	23439	20%	22%	21%
TERTIARY SELLERS	879	353	1232	2%	1%	1%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	8661	6695	15356	17%	11%	14%
TRANSPORT AND COMMUNICATIONS	2657	379	3036	5%	1%	3%
SECTORALLY UNSPECIFIED OCCUPATIONS	2865	1101	3966	6%	2%	4%
WITHOUT OCCUPATION OR UNSTATED	5880	7917	13797	11%	13%	12%
WORKING POPULATION	32049	29571	61620	62%	50%	55%
NON-WORKING POPULATION	20034	29705	49739	38%	50%	45%
TOTAL POPULATION	52083	59276	111359	100%	100%	100%

Chart 9- Ivanovo 1926 Total Population, Sectoral Occupational Allocation

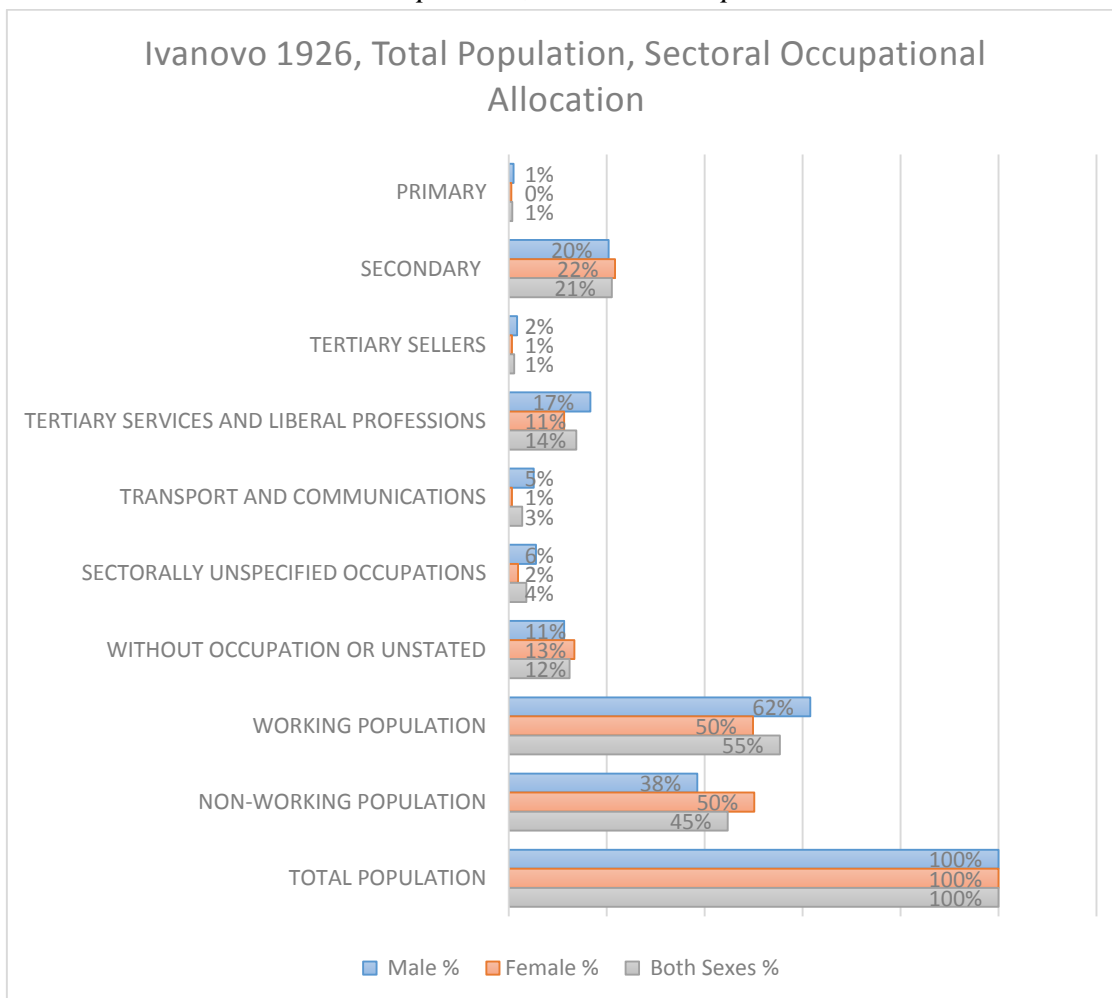


Table 10-Ivanovo 1926 Working Population, Sectoral Occupational Allocation

IVANOVO 1926 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	500	294	794	2%	1%	1%
SECONDARY	10607	12832	23439	33%	43%	38%
TERTIARY SELLERS	879	353	1232	3%	1%	2%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	8661	6695	15356	27%	23%	25%
TRANSPORT AND COMMUNICATIONS	2657	379	3036	8%	1%	5%
SECTORALLY UNSPECIFIED OCCUPATIONS	2865	1101	3966	9%	4%	6%
WITHOUT OCCUPATION OR UNSTATED	5880	7917	13797	18%	27%	22%
WORKING POPULATION	32049	29571	61620	100%	100%	100%

Chart 10- Ivanovo 1926 Working Population, Sectoral Occupational Allocation

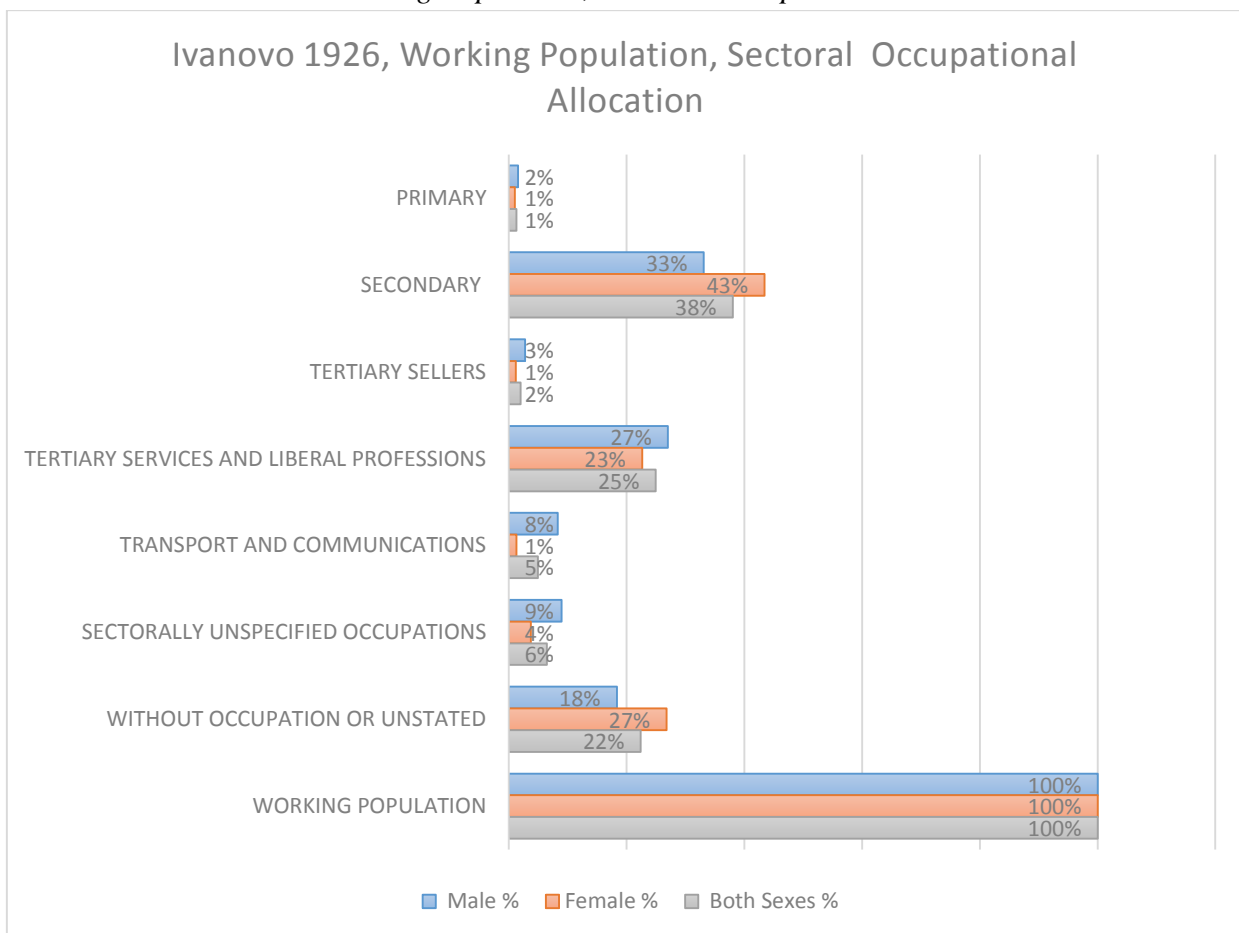
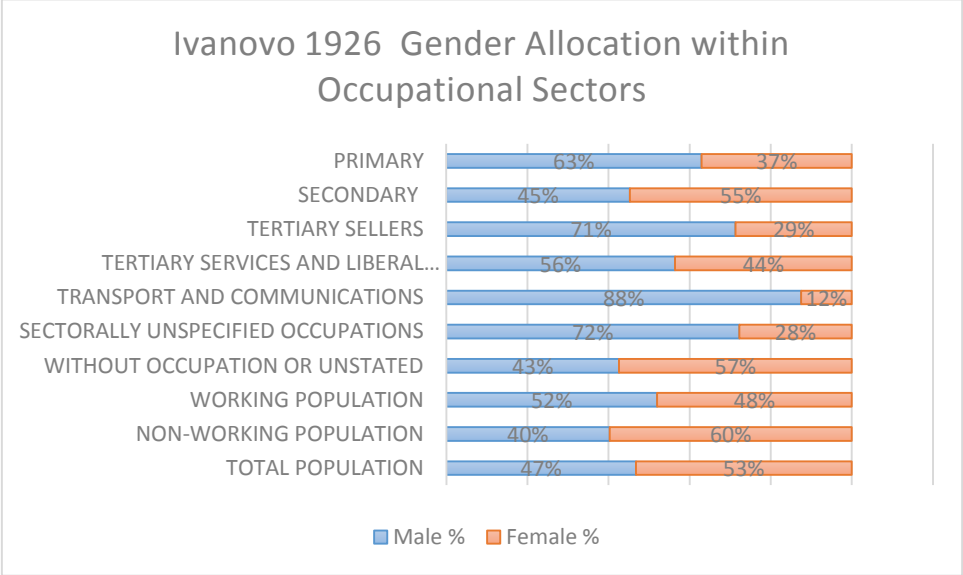


Chart 11- Ivanovo 1926 Gender Allocation within Occupational Sectors



Summary of Charts: Ivanovo 1926 Sectoral Occupational Allocation

Looking at Census 1926, secondary sector leads in shares among all other PSTI sectors. However, the earlier dominance of secondary sector among the total and working population appears to be alleviated where %21 of total population (compared to earlier %43 in 1897) has been registered as such. Meanwhile, the new destination for the persons who are no longer in the secondary sector occupations is not clear. Since tertiary sector does not extend on its previous %17 share by a large extent, this points a rise in the sectorally 'unspecified or without occupation categories' as well as 'non-working population'. The overall labour participation rate has decreased where working population overall fell from %60 to %55 despite the upwards trend in the rate of female labor participation rate. This means, among total population, males could be mainly responsible for this decline of overall labour participation rates more than females.

While looking at working population, one interesting point to note in 1926 is the diversification of male workforce among the sectors. Females has a greater concentration in the secondary sector (%43) than males (%33) while males, occupationally more concentrated on tertiary services and liberal professions. We must recall that situation was just on the contrary in 1897, females were more concentrated in tertiary services and males were more concentrated in secondary sector activities.

Looking at the gender breakdown of each individual sector, we must notice that in 1926, while secondary sector has now more females than males, meanwhile, tertiary sector, mainly tertiary services and liberal professions is clearly dominated by males. (%45 to %55) Higher

concentration in some specific sectors for females indicates a sharpening gender differences within occupational structure between 1897 and 1926.

General Outlook: Ivanovo Sectoral Occupational Shift between 1897-1926

Chart 12- Ivanovo 1897-1926 Total Population, Both Sexes, Sectoral Occupational Shift

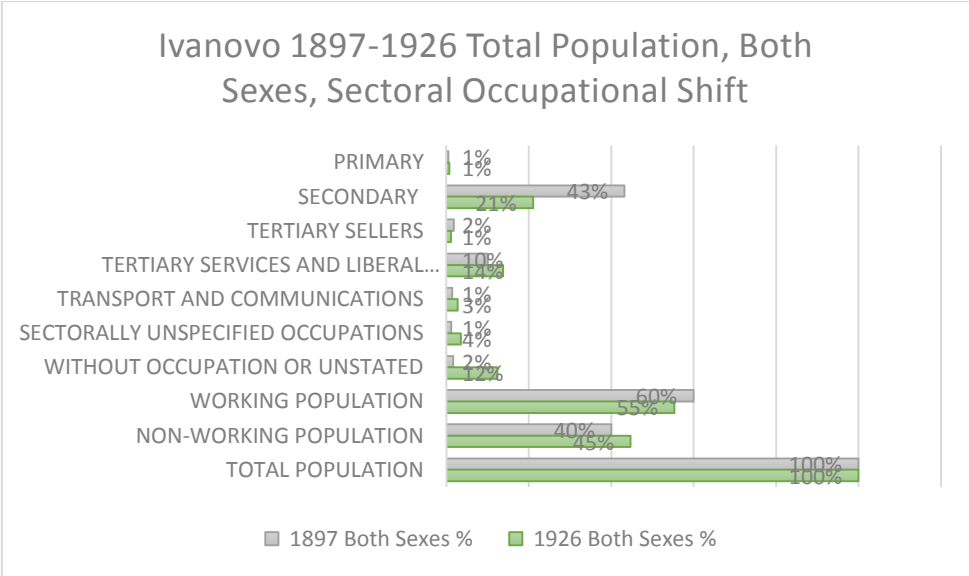


Chart 13- Ivanovo 1897-1926 Working Population, Both Sexes, Sectoral Occupational Shift

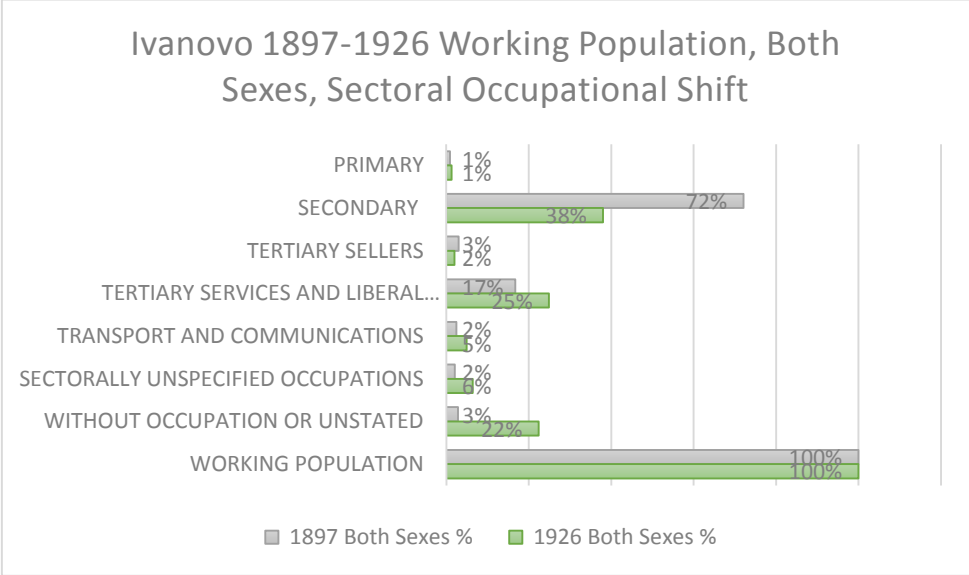


Chart 14- Ivanovo 1897-1926 Total Population, Males, Sectoral Occupational Shift

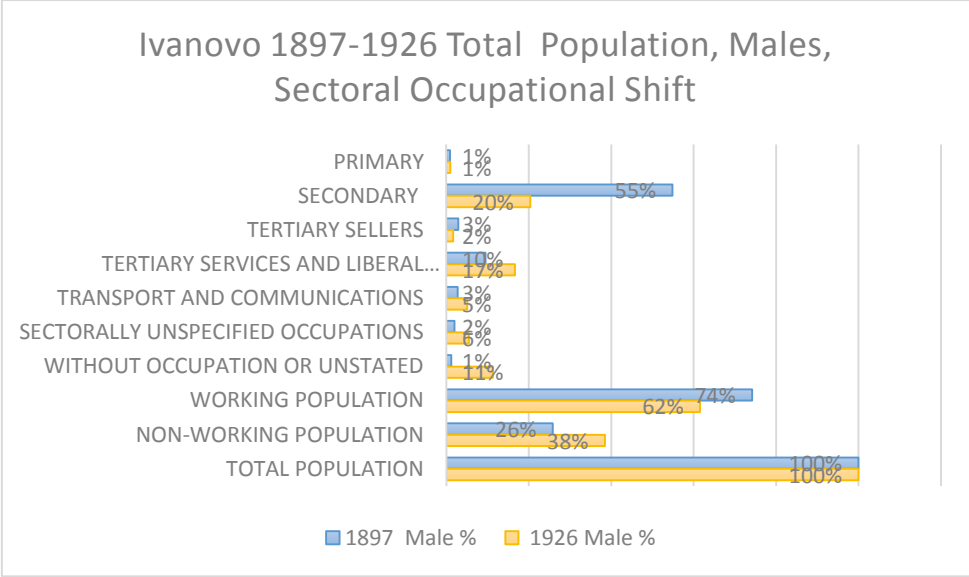


Chart 15- Ivanovo 1897-1926 Working Population, Males, Sectoral Occupational Shift

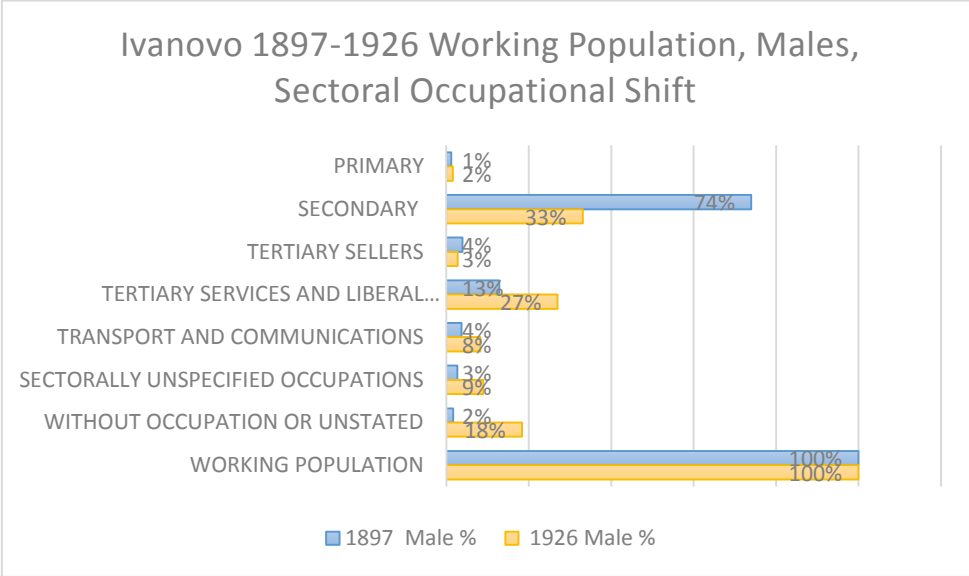


Chart 16- Ivanovo 1897-1926 Total Population, Females, Sectoral Occupational Shift

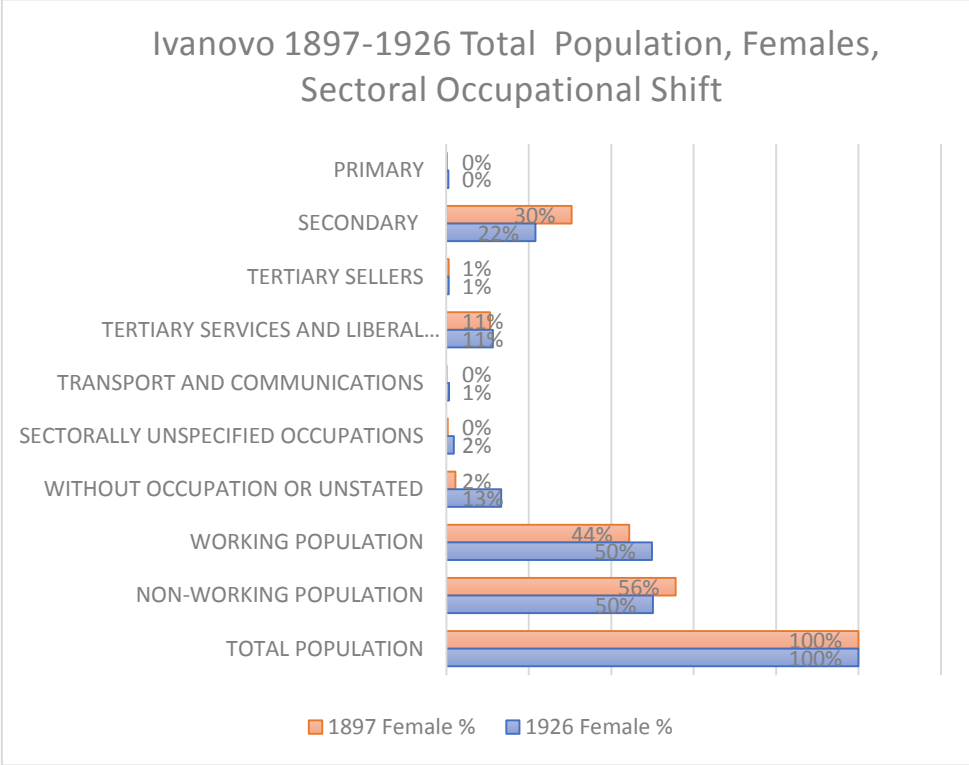
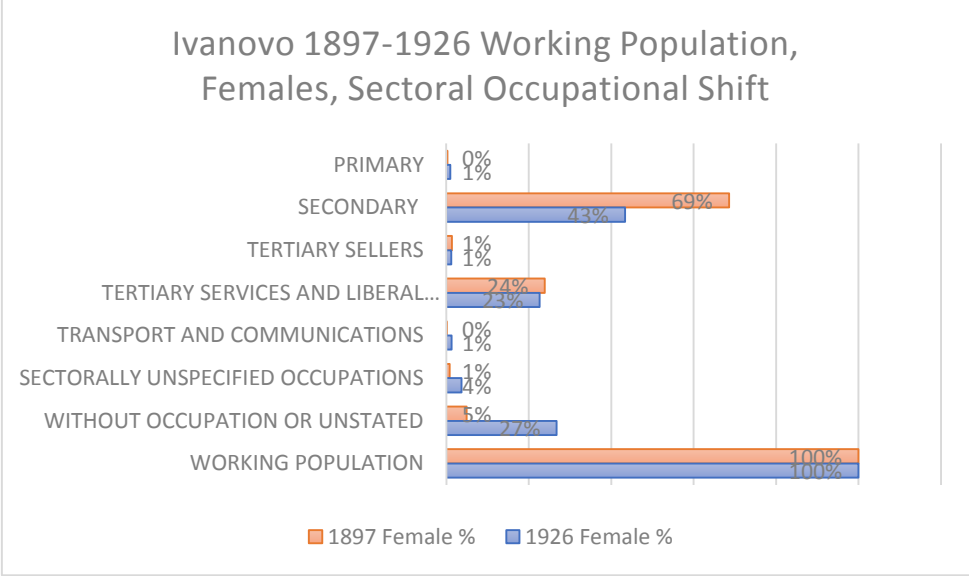


Chart 17- Ivanovo 1897-1926 Working Population, Females, Sectoral Occupational Shift



Summary of Charts: Ivanovo 1897-1926, Sectoral Occupational Transformation

Between 1897 and 1926 total population of the city of Ivanovo has been increased while the working population rate has been diminished from %60 to %55. This fall in the working population rate is due to relevant fall in the working population rate of males while for females, the relevant rate is on the rise %44 to %50.

Among total population and both sexes combined, Ivanovo loses its immense concentration around secondary sector while tertiary services (tertiary dealers, transportation and professions), sectorally unspecific occupations as well as unstated or without occupation population among the working population is on the rise.

Primary sector, for neither in 1897 nor in 1926 occupies a remarkable place within city economic activity. Regarding males, while working population goes down from %74 to %62, the heavy concentration on secondary sector activities has been diminished. Regarding tertiary sector, while the share of 'tertiary sellers' remain stagnant, 'tertiary services and liberal professions' as well as transport and communications rises in shares. On the other hand, under the sectorally unspecified occupations and without occupation or unstated titles within working population is also on the rise.

Regarding females, the rate of working population among the total population is on the rise, unlike males. The female concentration in secondary sector has been diminished as well but the cut is not as severe as it was the case for males. Meanwhile, unlike males, tertiary sector

concentrations among females remain stagnant while the population labelled under ‘without occupation or unstated’ soared aggressively.

Sub-sectoral Occupation Transformation in Ivanovo: 1897-1926

Secondary Sub-sectoral Occupational Allocation

Table 11- Ivanovo 1897 Total Population, Secondary Sub-sectoral Occupational Allocation

IVANOVO 1897(# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
SECONDARY	15590	7846	23436	55%	30%	43%
Food industries	247	4	251	1%	0%	0%
Drink industries	20	2	22	0%	0%	0%
Tobacco industries	0	0	0	0%	0%	0%
Clothing	416	517	933	1%	2%	2%
Footwear	342	2	344	1%	0%	1%
Textiles	11041	7237	18278	39%	28%	34%
Wood industries	451	52	503	2%	0%	1%
Industries using leather, bone etc.	147	14	161	1%	0%	0%
Industries producing products from fibres	0	0	0	0%	0%	0%
Furnishing	0	0	0	0%	0%	0%
Paper industries	1	2	3	0%	0%	0%
Printing	172	0	172	1%	0%	0%
Earthenware, pottery manufacture	1	0	1	0%	0%	0%
Glass industries	1	0	1	0%	0%	0%
Precious metals and jewellery	21	0	21	0%	0%	0%
Instrument making	21	0	21	0%	0%	0%
Chemical, soap, adhesives, manufacture	153	0	153	1%	0%	0%
Rubber, manufacture	0	0	0	0%	0%	0%
Fuel industries	0	0	0	0%	0%	0%
Iron and steel manufacture and products	481	6	487	2%	0%	1%
Non-ferrous metal manufacture and products	103	0	103	0%	0%	0%
Machines and tools, making and operation	847	7	854	3%	0%	2%
Road transport vehicles	47	0	47	0%	0%	0%
Boat and ship building	0	0	0	0%	0%	0%
Brick and tile manufacture	15	0	15	0%	0%	0%
Stone and mineral processing industries	0	0	0	0%	0%	0%
Building and construction	1026	3	1029	4%	0%	2%
Public Works	22	0	22	0%	0%	0%
Minor manufactures and trades	15	0	15	0%	0%	0%
WITHOUT OCCUPATION AND UNSTATED	347	566	913	1%	2%	2%
WORKING POPULATION	21069	11441	32510	74%	44%	60%
NON-WORKING POPULATION	7338	14360	21698	26%	56%	40%
TOTAL POPULATION	28407	25801	54208	100%	100%	100%

Chart 18-Ivanovo 1897 Total Population Secondary Sub-sectoral Occupational Allocation

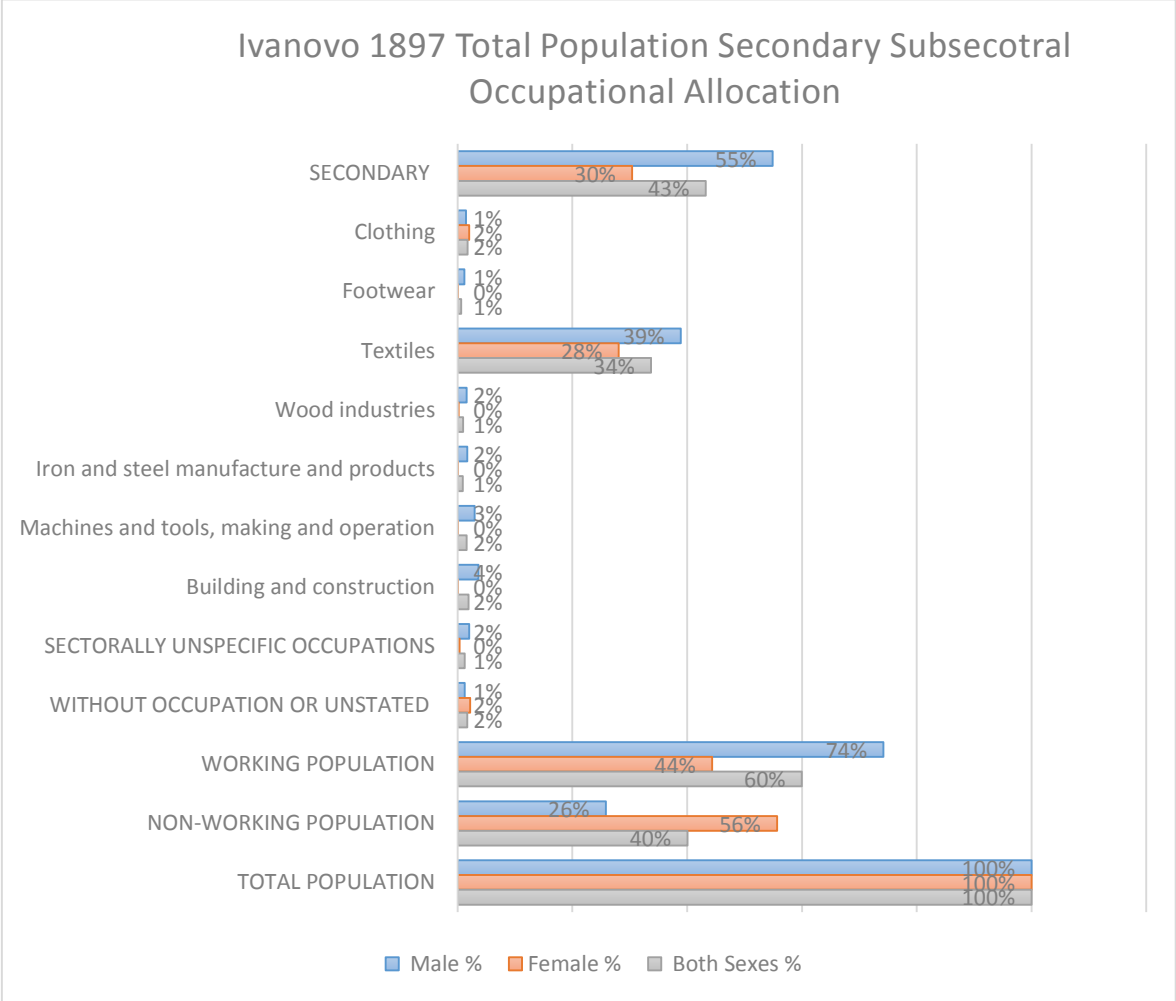


Chart 19- Ivanovo 1897 Working Population, Secondary Sub-sectoral Occupational Allocation

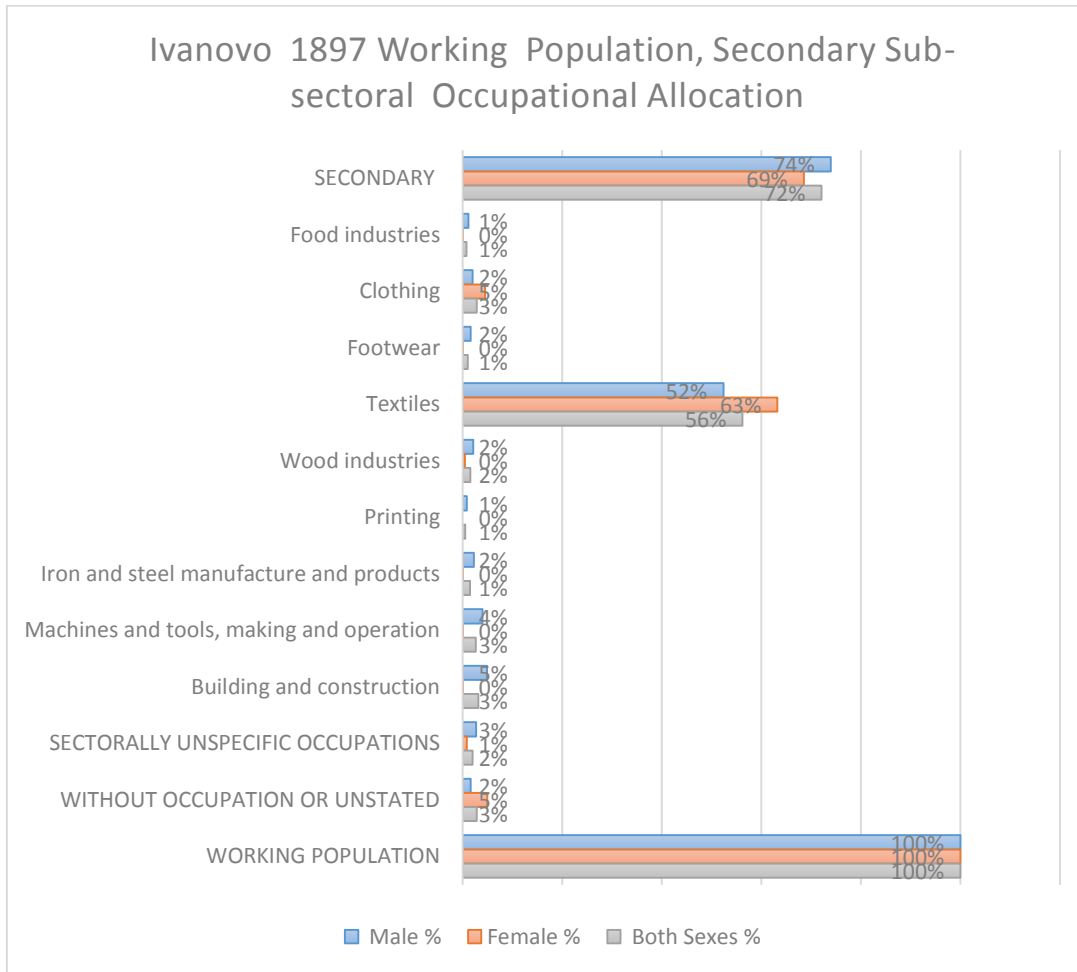
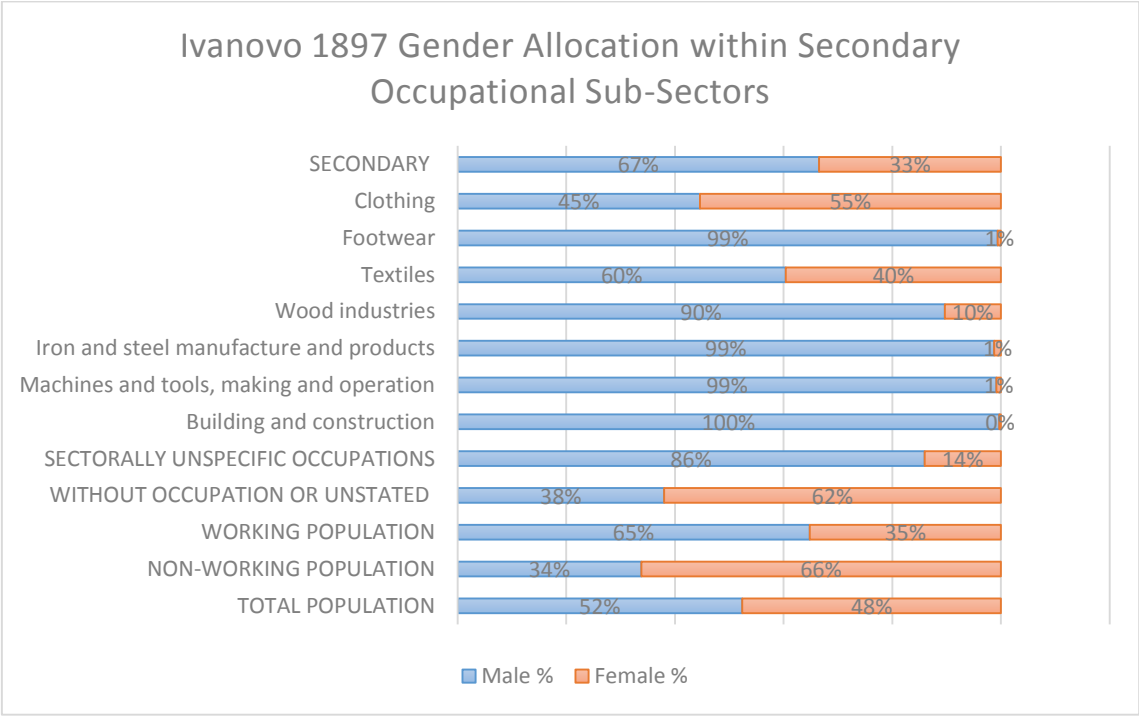


Chart 20-Ivanovo 1897 Gender Allocation within Secondary Occupational Sub-Sectors



Summary of Charts: Ivanovo 1897 Secondary Sub-sectoral Occupational Allocation

For males, despite textile being the most significant sub-sector, more heavy industry related sub-sectors like building and construction, machines, tools, making and operation or iron and steel manufacture and products as well as wood industries show some prominence. These relatively more heavy (compared to textiles or clothing) industries (wood, machine making, building and construction and iron steel) compose almost %11 of male working population.

Female working population, meanwhile, are concentrated on two sub-sectors only: textiles and clothing. Notice that there is a firm possibility that female concentration on merely two sector is another indication of understatement of other females, having occupations from different

sectors but they were not merely included in the census records. This would not disrupt the general picture, though, that in 1897, Ivanovo was a textile city by a great extent.

From a gender perspective, secondary sector is more male dominated but more females to be found in textiles and clothing industries while males are almost the only gender that has presence within the occupational categories as iron and steel manufacturing, machines and tools, making and operation as well as building and construction.

Table 12- Ivanovo 1926 Total Population, Secondary Sub-sectoral Occupational Allocation

IVANOVO 1926(# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH%
SECONDARY	10607	12832	23439	20%	22%	21%
Other Secondary	43	3	46	0%	0%	0%
Food industries	369	54	423	1%	0%	0%
Tobacco industries	0	0	0	0%	0%	0%
Clothing	481	498	979	1%	1%	1%
Textiles	3419	12166	15585	7%	21%	14%
Wood industries	642	12	654	1%	0%	1%
Industries using leather, bone etc.	589	34	623	1%	0%	1%
Industries producing products from fibres	0	0	0	0%	0%	0%
Paper industries	4	10	14	0%	0%	0%
Printing	434	37	471	1%	0%	0%
Earthenware, pottery manufacture	7	0	7	0%	0%	0%
Glass industries	0	0	0	0%	0%	0%
Precious metals and jewelry	24	0	24	0%	0%	0%
Chemical, soap, adhesives, manufacture	0	0	0	0%	0%	0%
Rubber, manufacture	0	0	0	0%	0%	0%
Fuel industries	891	2	893	2%	0%	1%
Iron and steel manufacture and products	359	1	360	1%	0%	0%
Non-ferrous metal manufacture and products	85	0	85	0%	0%	0%
Metal working	75	0	75	0%	0%	0%
Machines and tools, making and operation	1747	6	1753	3%	0%	2%
Brick and tile manufacture	19	0	19	0%	0%	0%
Building and construction	1419	9	1428	3%	0%	1%
Mining	0	0	0	0%	0%	0%
SECTORALLY UNSPECIFIED OCCUPATIONS	2865	1101	3966	6%	2%	4%
WITHOUT OCCUPATION OR UNSTATED	5880	7917	13797	11%	13%	12%
Unemployed	2255	3954	6209	4%	7%	6%
Uncertain status	3625	3963	7588	7%	7%	7%
WORKING POPULATION	32049	29571	61620	62%	50%	55%
NON-WORKING POPULATION	20034	29705	49739	38%	50%	45%
TOTAL POPULATION	52083	59276	111359	100%	100%	100%

Chart 21- Ivanovo 1926 Total Population, Secondary Sub-sectoral Occupational Allocation

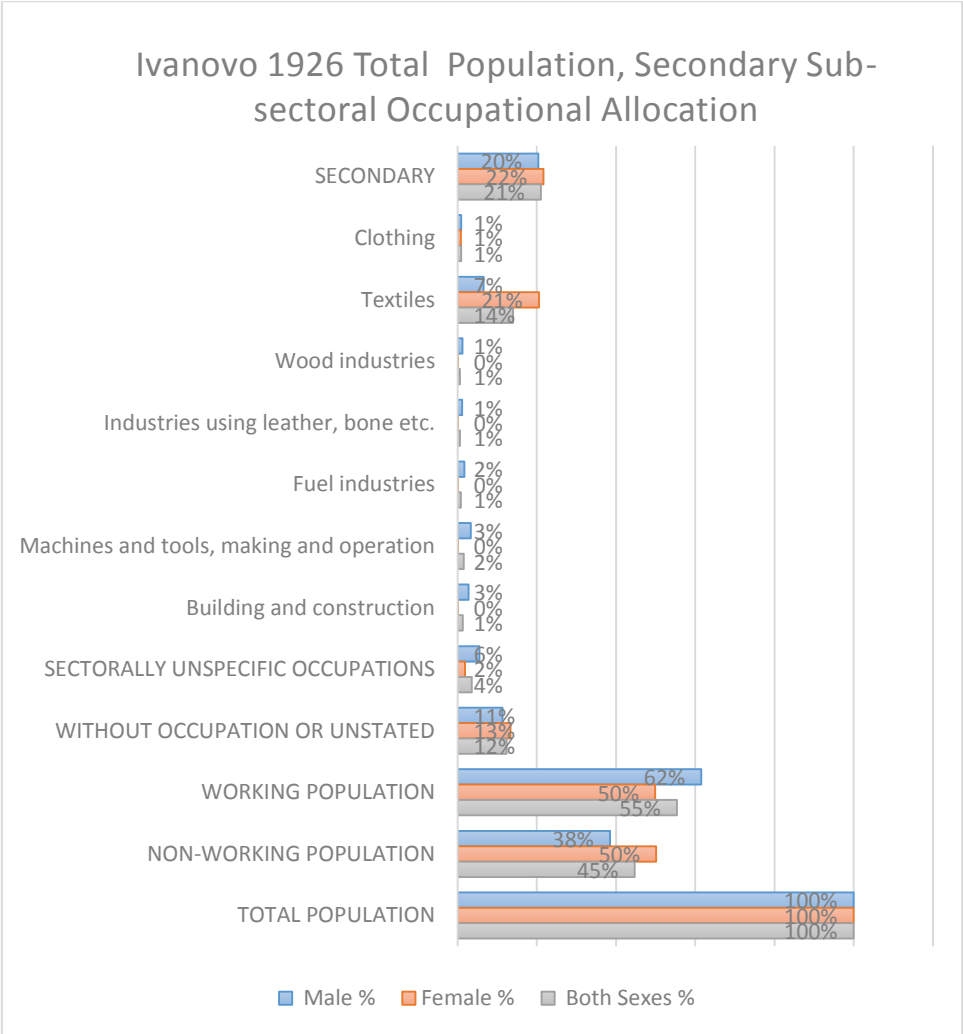


Chart 22- Ivanovo 1926 Working Population, Secondary Sub-sectoral Occupational Allocation

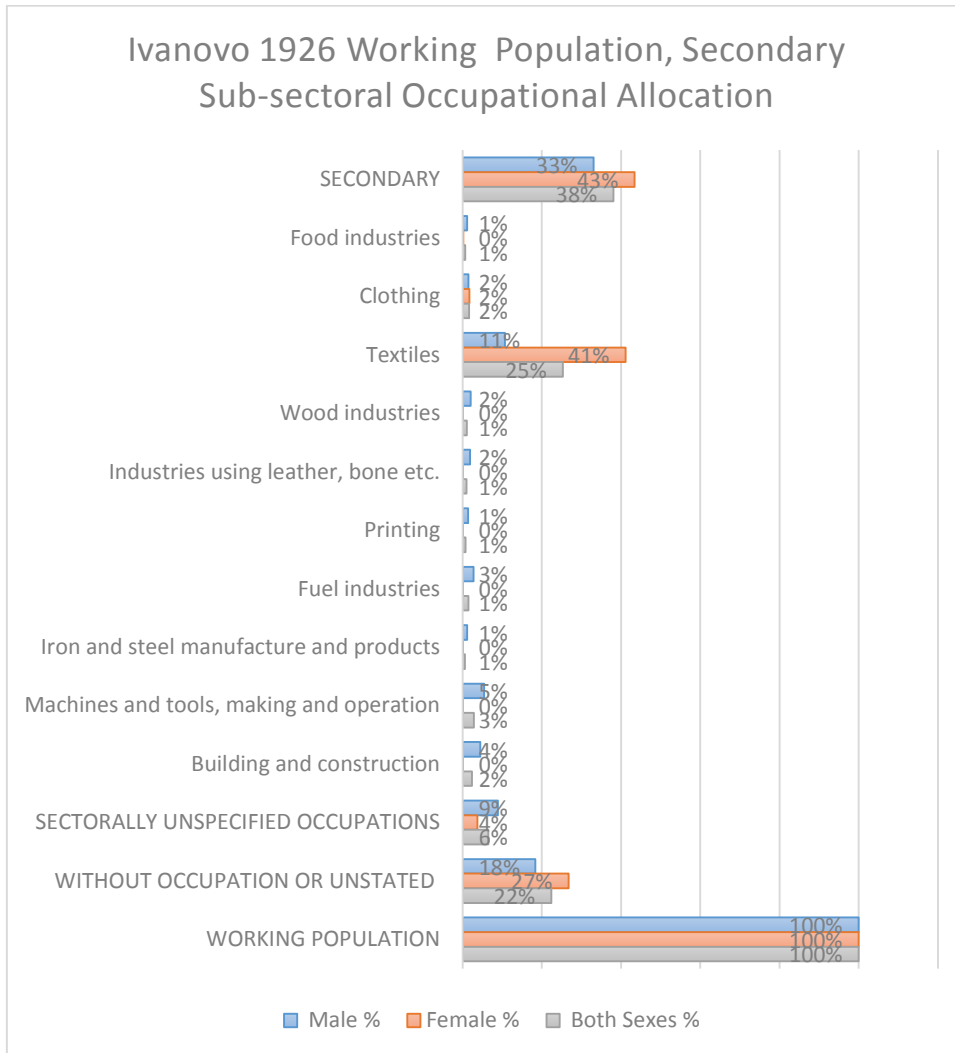
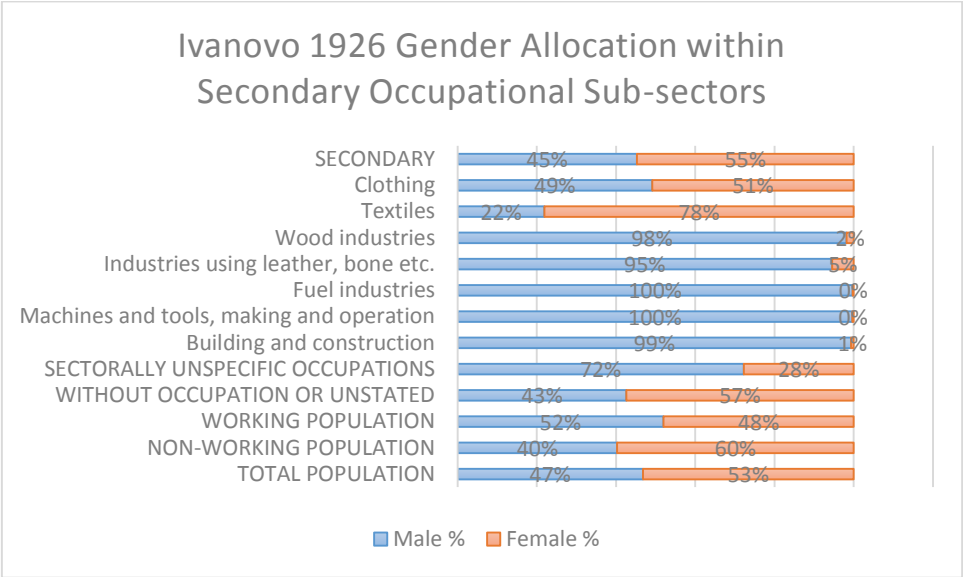


Chart 23-Ivanovo 1926 Gender Allocation within Secondary Occupational Sub-sectors



Summary of Charts: Ivanovo 1926, Secondary Sub-sectoral Occupational Allocation

When we look at 1926 occupational Sub-sectoral structure for the secondary sector, we observe the moderation of the textile dominance among occupations by some extent but despite this, the resilience that textile as a Sub-sectoral occupation have exhibit, just as the parent secondary sector have is remarkable. Regarding females, the rate of concentration within textile sector is even higher (%41) while male attachment textiles as an occupational sub-sector has been greatly diminished (%11). Without a doubt this huge fall in the rate of male population engaged in Sub-sectoral textile occupation is stemming from a methodological adjustment between the two censuses, more or less it could be argued that male working population follows a certain path: as it was the case in 1897, male working population has a larger dispersion among secondary sub-sectors as well as machine making and building industries continues to flourish. Apart from them, there are other Sub-sectoral occupational groups added to the range: printing (cloth) fuel industries (mainly electricity supplying units) as well as leather and bone processing. All of these newly flourishing industries show in ‘heavy-industry’ based, capital-

intensive type of industrialization process between Ivanovo in 1897-1926 regarding working population males.

Regarding working females, textiles and clothing would have a more and more central place and despite an earlier 'super-concentration' while almost all working females appears to have an occupation under textiles sub-sector in 1926. Along with textiles, the remaining female working population, like it was in 1897, have an occupation within clothing sub-sector. According to Census records 1926, clothing and textiles are in female domination when it comes to gender balance, which means the gender situation that has been formed in 1897 has changed within the secondary sector.

The gender balance within textiles has turned totally in favour of females from 1897 to 1926. According to the shares obtained from our analysis, textile sector is almost by %80 account consisted of females while for clothing, the case is almost even. While secondary sector working population is dominated by females and textiles led the way, almost all males are concentrated on 'heavy-industry' related activities.

General Outlook: Ivanovo Secondary Sub-sectoral Occupational Shift between 1897-1926

Chart 24- Ivanovo 1897-1926 Total Population, Both Sexes, Sectoral Occupational Shift

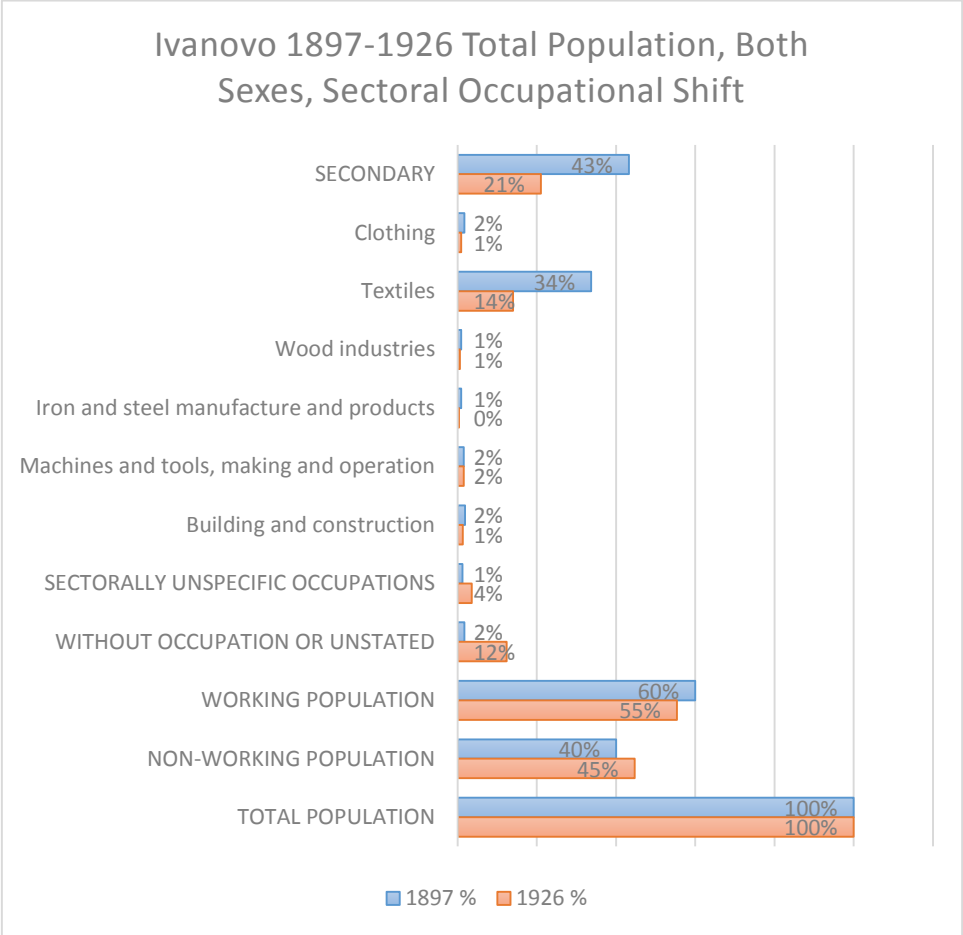


Chart 25- Ivanovo 1897-1926 Working Population, Both Sexes, Sectoral Occupational Shift

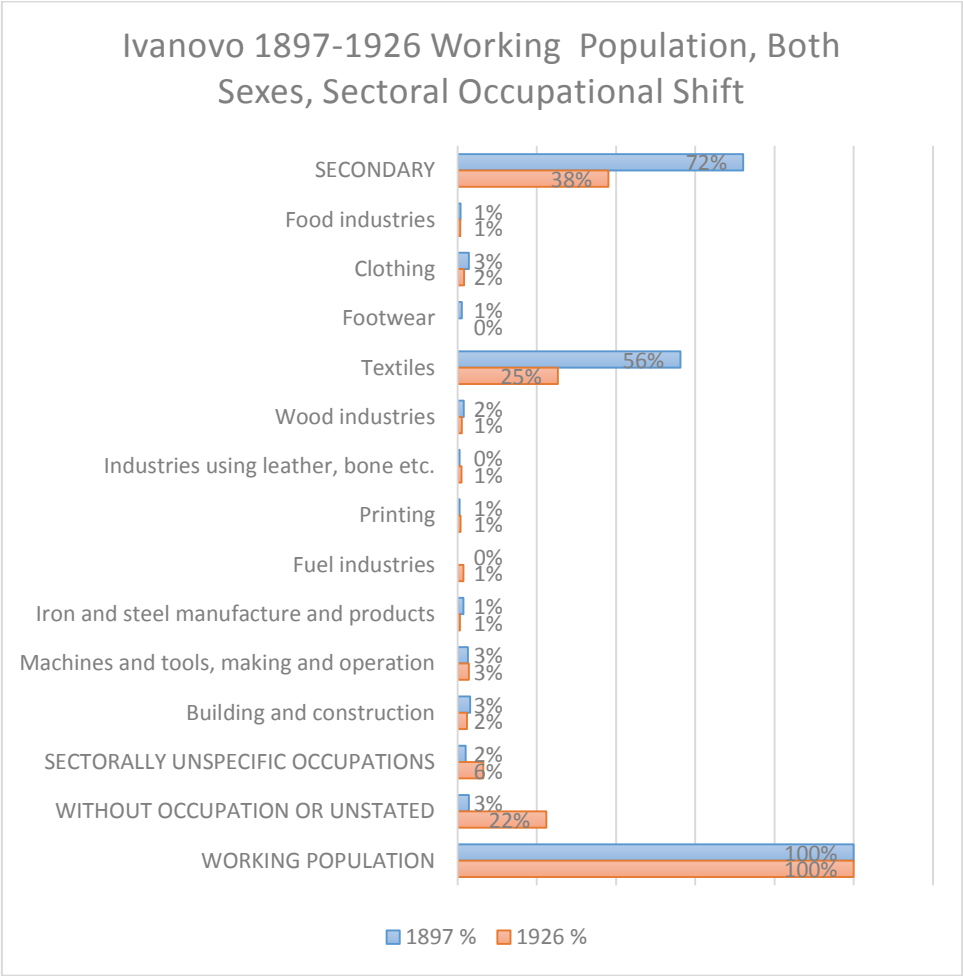


Chart 26- Ivanovo 1897-1926 Total Population, Males, Secondary Sub-sectoral Occupational Sub-sectoral Shift

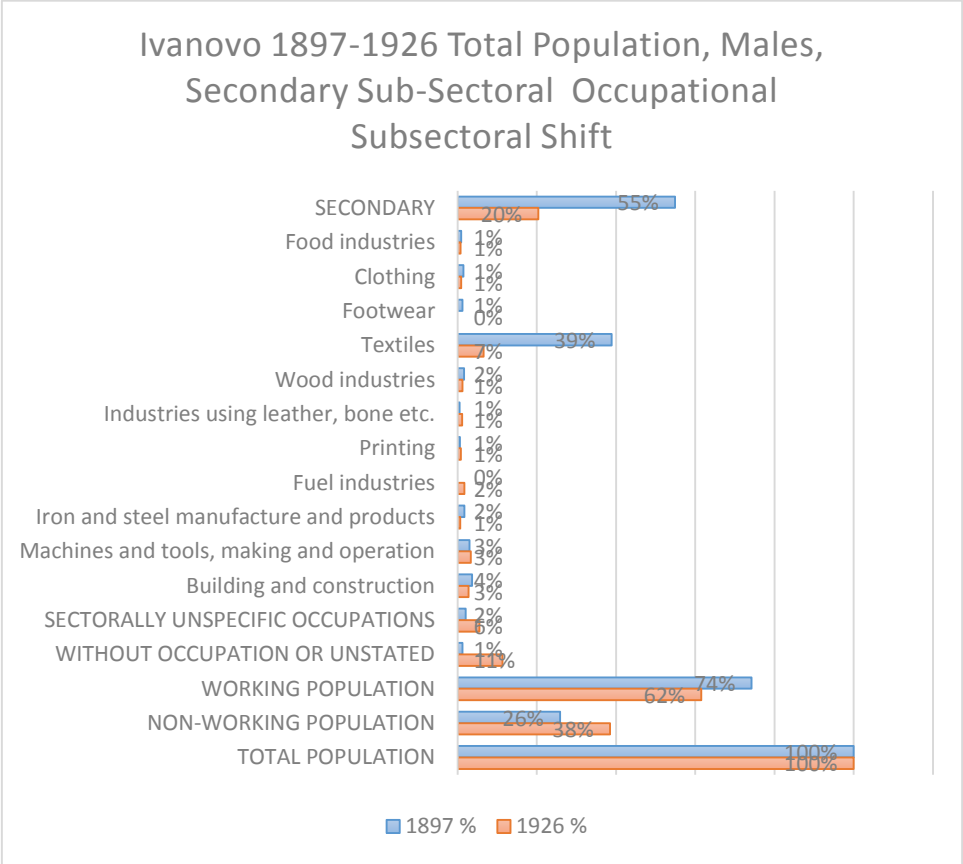


Chart 27- Ivanovo 1897-1926 Working Population, Males, Secondary Sub-sectoral Occupational Shift

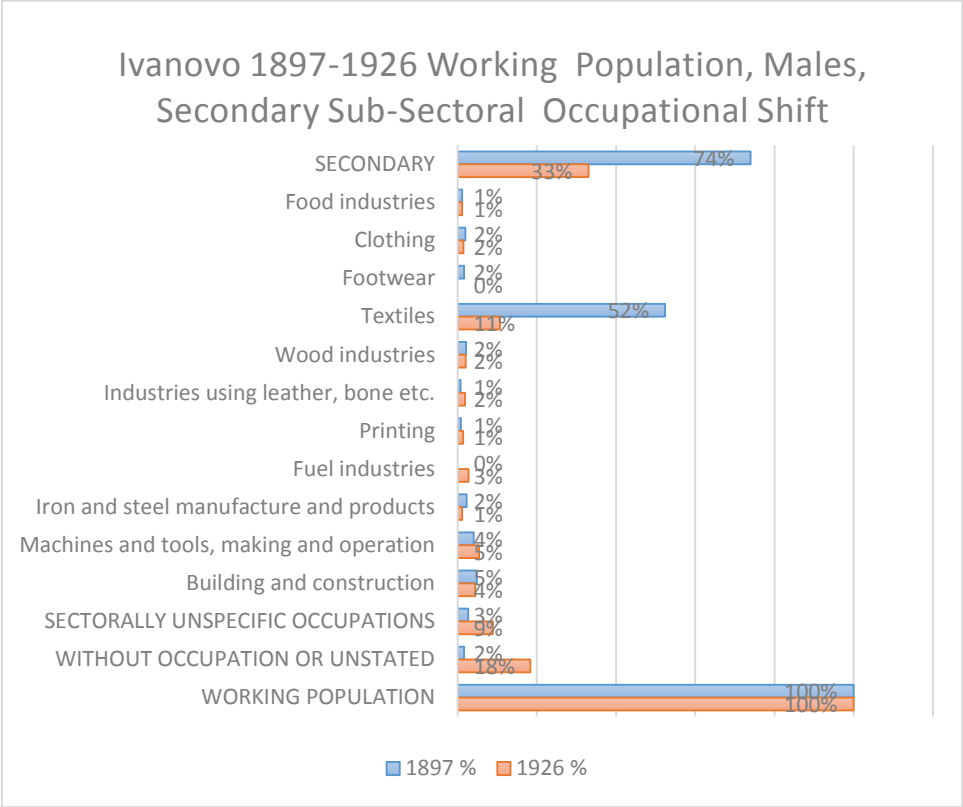


Chart 28- Ivanovo 1897-1926 Total Population, Females, Secondary Sub-sectoral Occupational Shift

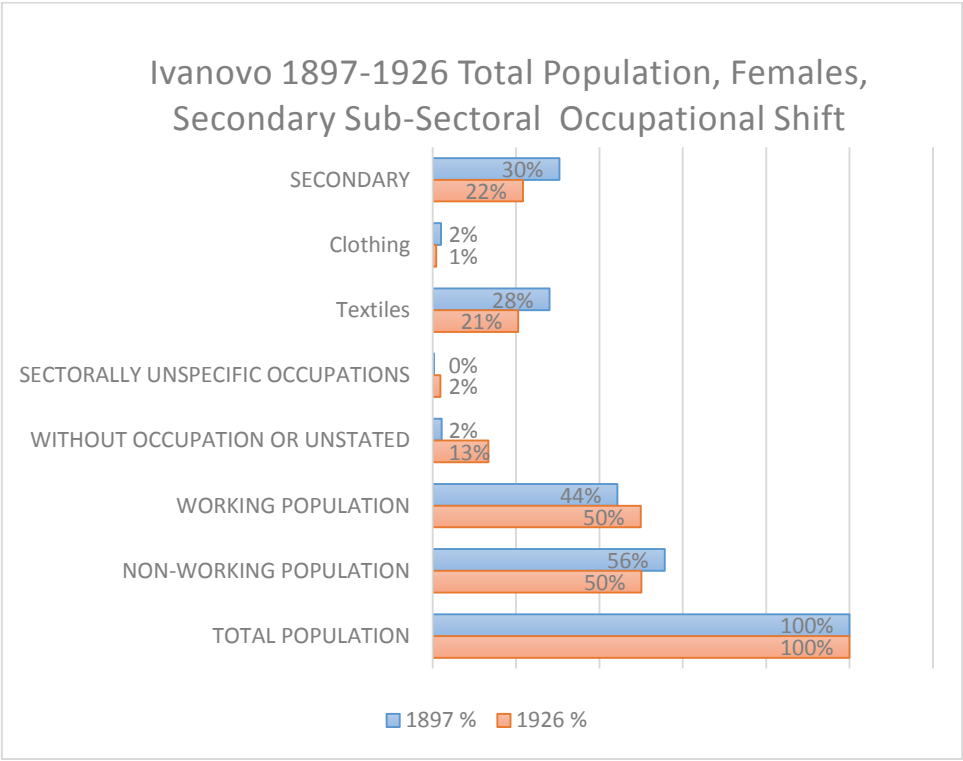
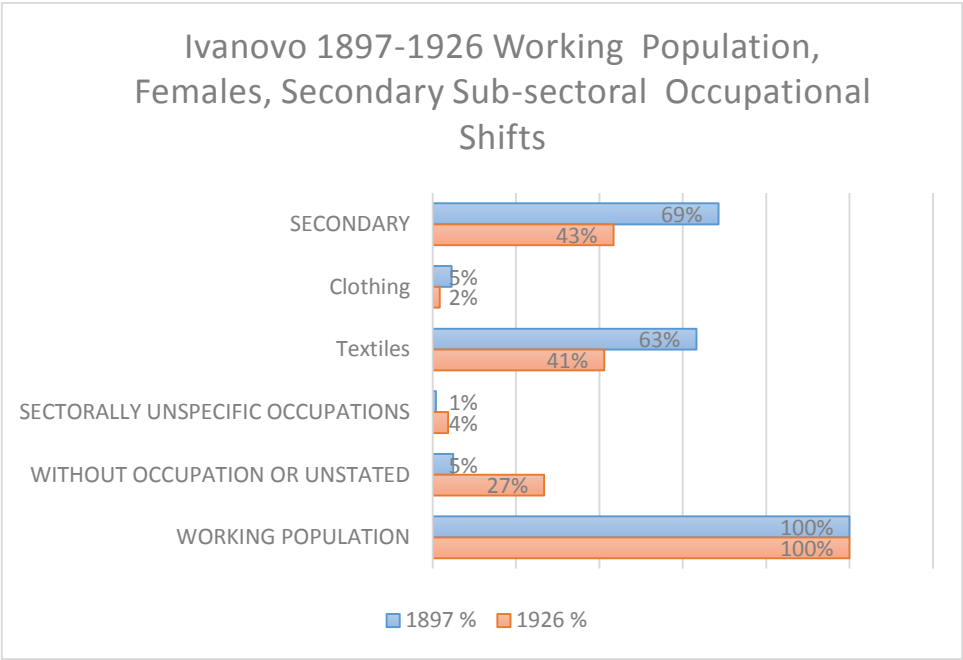


Chart 29- Ivanovo 1897-1926 Working Population, Females, Secondary Sub-sectoral Occupational Shift



Summary of Charts: Ivanovo Secondary Sub-sectoral Occupational Allocation: 1897-1926

In earlier subsection (sectoral analysis only), we have seen that between 1897 and 1926 in Ivanovo, leading secondary sector has lost some of its shares when both sexes combined among other occupational sectors. This loss was somewhat more limited for female working population than male working population. Here, we would like to elaborate with a higher level of detail: Sub-sectoral occupation.

Among secondary sector Sub-sectoral occupations, most prominent sub-sector was textiles in 1897 and it keeps its position until 1926. In other words, while the sectoral occupational structure of Ivanovo was turning to tertiary oriented from secondary oriented structure, regarding secondary sector activities only, Ivanovo remains a ‘textile’ town from 1897 to 1926.

Meanwhile, regarding the same period, more capital intensive activities like machines and tools, making and operation as well as fuel industries remarkably rise in prominence among other secondary sector Sub-sectoral occupations. One should also not overlook the resilience of the building and construction sub-sector which could be an indication of a large influx of population and a extending city economy.

When we look at male occupational transformation, the rise in the capital intensive activities is worth noticing among the secondary sector. We must recall that from 1897 to 1926, all absolute number of males who has an occupation within secondary sector, labour participation rate of males as well as secondary sector concentration among working male population has been greatly diminished. Regarding the part of male working population who has remained in secondary sector: they turned to building and construction, machines and tools making and operation or fuel industries secondary sub-sectors. One should not overlook that the majority of secondary sector males, would be classified under textiles occupational sub-sector, albeit in a diminished share from 1897 to 1926.

Female working population, on the other hand; rose in numbers within secondary sector and has even a higher concentration on textile sub-sector. From 1897 to 1926, clothing, as the second most prominent sub-sector loses some of its share but nevertheless, in 1926, there are as much as clothing females as clothing males.

In summary, we could suggest that in general terms, the textile-oriented Sub-sectoral occupational structure was being transformed while the males are either migrating to tertiary

sector or leaving occupations related with 'light industry' and turn to more 'heavy' industry related activities. Females, meanwhile, remain in textiles and clothing Sub-sectoral occupations with a higher concentration.

Tertiary Sub-sectoral Occupational Allocation

Table 13- Ivanovo 1897, Total Population, Tertiary Sector, Sub-sectoral Occupational Allocation

1897 Ivanovo (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
TERTIARY	4313	2902	7215	15%	11%	13%
TERTIARY DEALERS	826	157	983	3%	1%	2%
Other Tertiary Dealers	148	31	179	1%	0%	0%
Dealers in food	250	50	300	1%	0%	1%
Dealers in drink	133	17	150	0%	0%	0%
Dealers in tobacco	0	0	0	0%	0%	0%
Dealers in live animals	0	0	0	0%	0%	0%
Dealers in clothing and clothing accessories	40	8	48	0%	0%	0%
Dealers in textiles and products	138	33	171	0%	0%	0%
Dealers in wood and wood products	27	1	28	0%	0%	0%
Dealers in leather, hair and related animal products	19	0	19	0%	0%	0%
Dealers in fibrous vegetable products	1	0	1	0%	0%	0%
Dealers in paper and paper products	0	0	0	0%	0%	0%
Dealers in printed products	6	2	8	0%	0%	0%
Dealers in earthenware, pottery	3	7	10	0%	0%	0%
Dealers in precious metals and jewellery	0	0	0	0%	0%	0%
Dealers in instruments	0	0	0	0%	0%	0%
Dealers in chemicals and chemical products	23	1	24	0%	0%	0%
India rubber, gutta percha dealers	0	0	0	0%	0%	0%
Fuel dealers	0	0	0	0%	0%	0%
Dealers in iron and steel, and iron and steel products	35	7	42	0%	0%	0%
Dealers in machines, tools	0	0	0	0%	0%	0%
Dealers in stone and stone products	0	0	0	0%	0%	0%
Dealers in minor products	3	0	3	0%	0%	0%
TERTIARY SERVICES AND PROFESSIONS	2706	2736	5442	10%	11%	10%
Other Tertiary Services and Professions	0	0	0	0%	0%	0%
Food, drink and accommodation services	241	227	468	1%	1%	1%
Entertainment	35	12	47	0%	0%	0%
Miscellaneous service industries	269	141	410	1%	1%	1%
Domestic service	1343	1805	3148	5%	7%	6%
Financial services and professions	19	0	19	0%	0%	0%
Commercial and administrative services	73	3	76	0%	0%	0%
Professions	279	93	372	1%	0%	1%
Professional support	36	42	78	0%	0%	0%
Local government service	63	0	63	0%	0%	0%
National government service	122	0	122	0%	0%	0%
Armed forces	2	0	2	0%	0%	0%
Owners, possessors of capital	224	413	637	1%	2%	1%
TRANSPORTATION AND COMMUNICATION	781	9	790	3%	0%	1%
Other Transportation	0	0	0	0%	0%	0%
Road transport (animal power)	424	4	428	1%	0%	1%
Inland navigation	0	0	0	0%	0%	0%
Rail transport	303	3	306	1%	0%	1%
Communications	54	2	56	0%	0%	0%
SECTORALLY UNSPECIFIC OCCUPATIONS	568	93	661	2%	0%	1%

WITHOUT OCCUPATION AND UNSTATED	347	566	913	1%	2%	2%
WORKING POPULATION	21069	11441	32510	74%	44%	60%
NON-WORKING POPULATION	7338	14360	21698	26%	56%	40%
TOTAL POPULATION	28407	25801	54208	100%	100%	100%

Chart 30- Ivanovo 1897 Total Population, Tertiary Sectoral Occupational Allocation

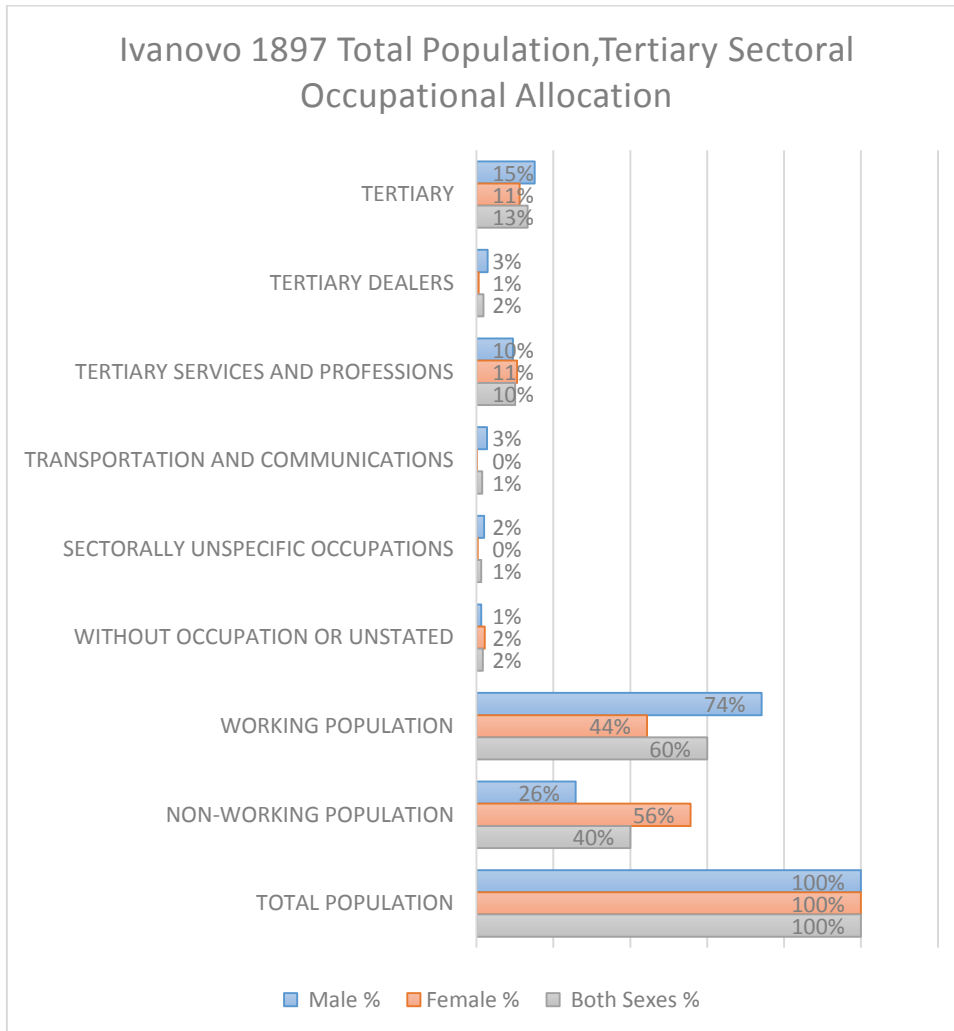


Chart 31- Ivanovo 1897 Total Population Tertiary Sub-sectoral Occupational Allocation

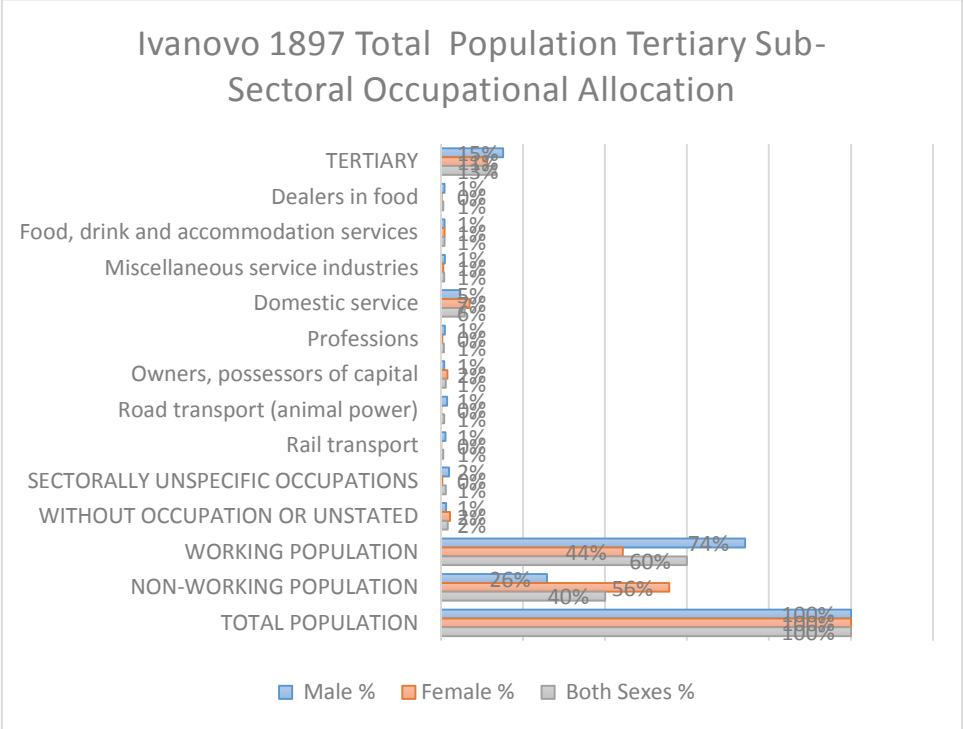


Chart 32- Ivanovo 1897 Working Population, Tertiary Sectoral Occupational Allocation

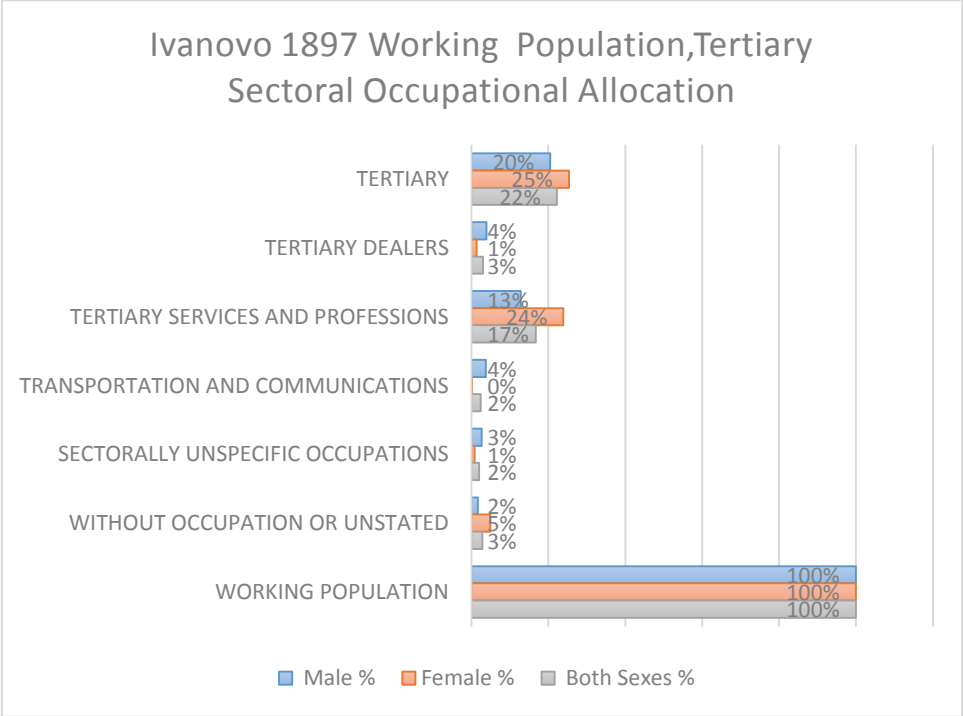


Chart 33- Ivanovo 1897 Working Population, Tertiary Sub-sectoral Occupational Allocation

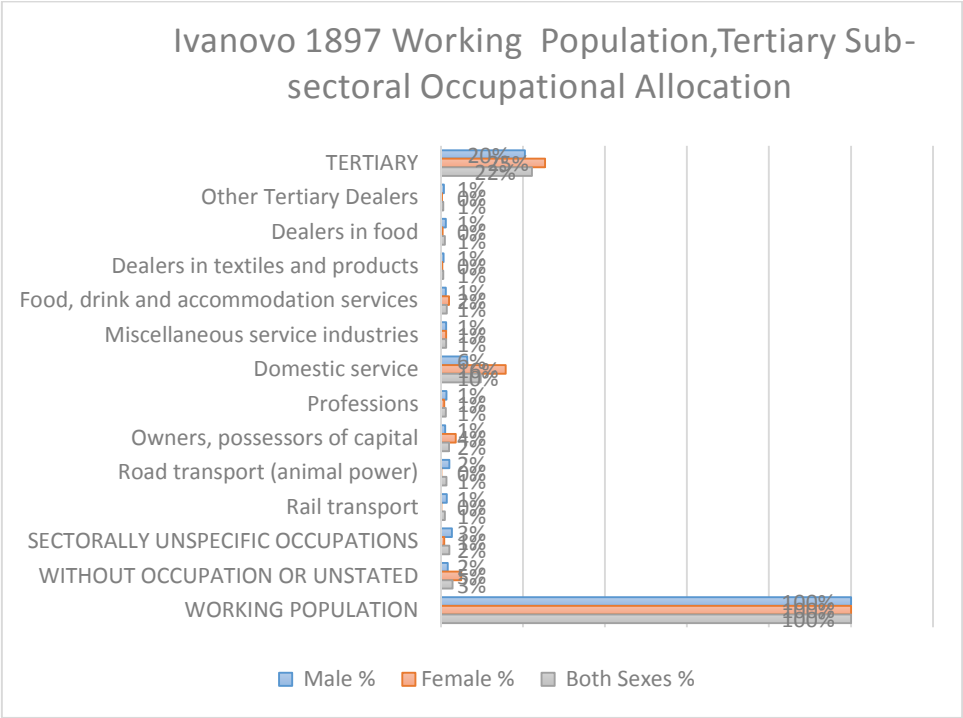


Chart 34- Ivanovo 1897 Gender Allocation within Tertiary Occupational Sectors

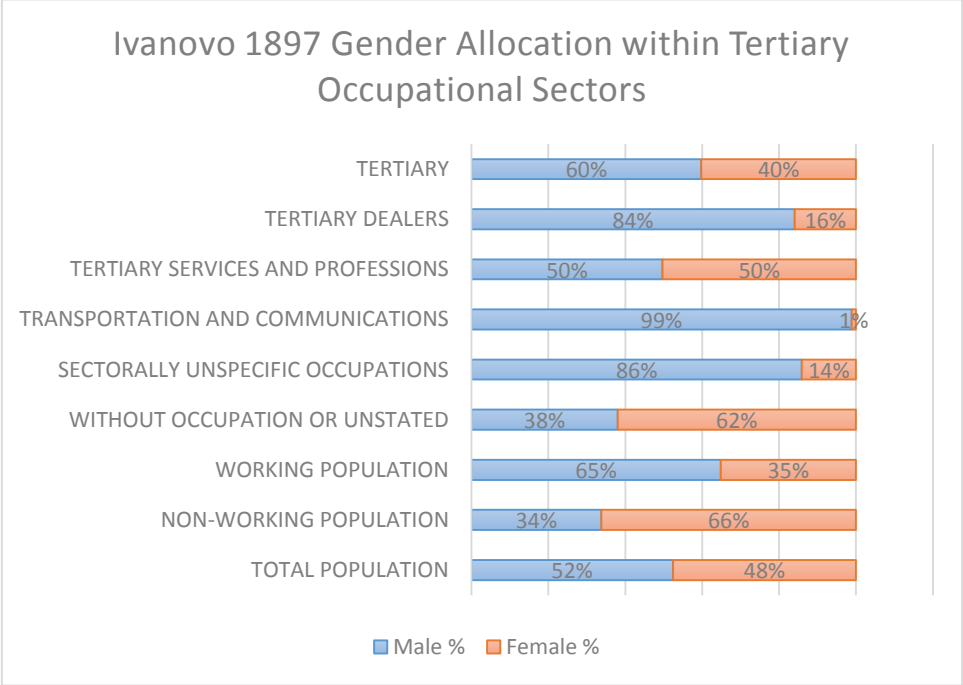
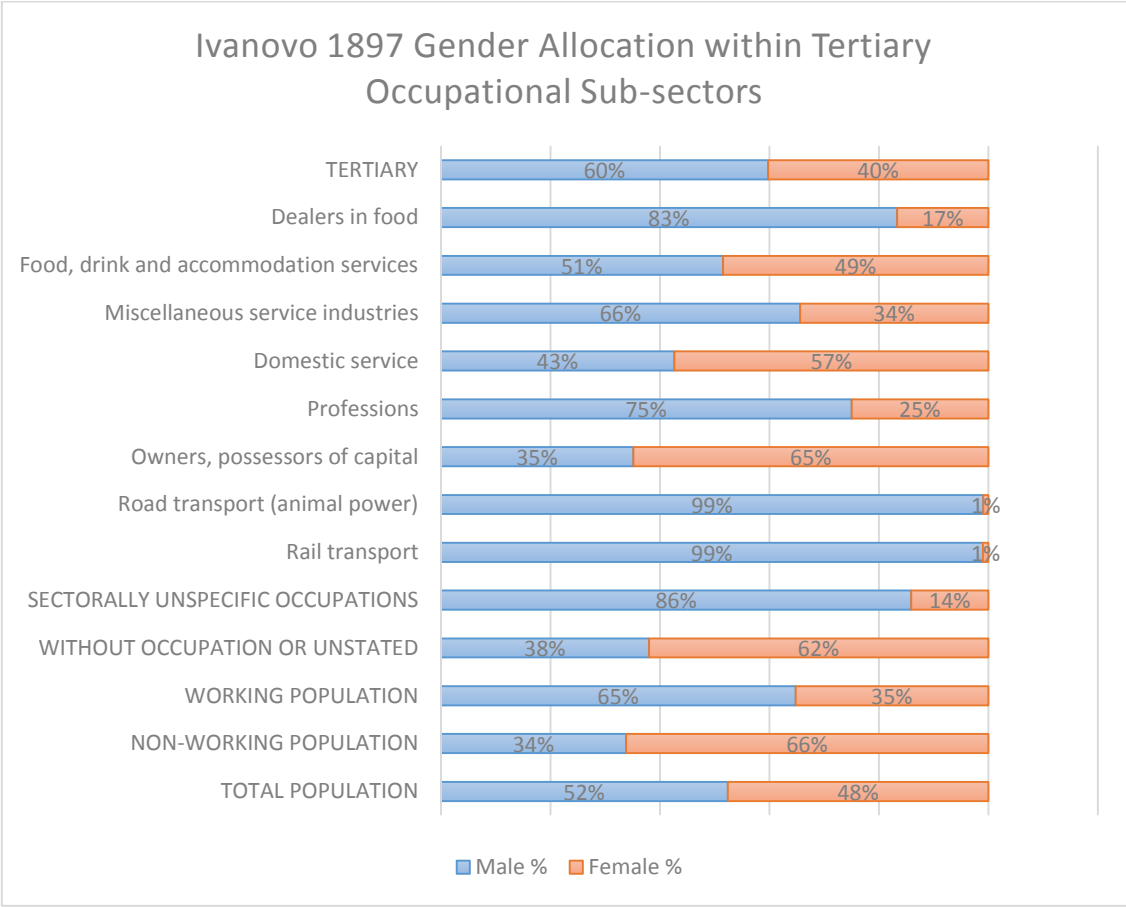


Chart 35 Ivanovo 1897 Gender Allocation within Tertiary Occupational Sub-sectors



Summary of Charts: Ivanovo 1897, Tertiary Sub-sectoral Occupational Allocation

Regarding the city of Ivanovo, according to our analysis of 1897 Census records, we must indicate that tertiary sector appears limited in its size. Among total population, only %15 of the Ivanovo persons (both sexes combined) have occupations under tertiary sector.

The majority of tertiary sector activities were consisted of domestic service sub-sector as well as ‘owners, possessors of capital’ Sub-sectoral title. To some extent, there are occupational concentration around road transportation via animal power and railway transportation as well.

The former two sub-sectors are prominent among females while the latter two is a common destination as a tertiary occupational sub-sector among males.

Regarding females, the most prominent Sub-sectoral occupation title was domestic service whereas %7 of total female population as well as %16 of working female population was classified as such. If we consider that only %44 of female population appear to be within 'working population', this is an important share. One another sub-sector that females have the majority was the owners and possessors of capital sub-sector. These are females, who owns houses and make their living from rents. In the cities like Ivanovo, where high rate of in-migration generally brings about a housing problem and perhaps, this strong rate of 'owners and possessors of capital' reflects this phenomena.

Males, however, are more dominant in dealers and sellers as well as local and national government services and transport which is barely surprising. Nevertheless, tertiary sector does not stand as a very important source of occupation for males whereas only %11 of working population has been indicted as an occupation within tertiary sector.

Table 14- Ivanovo 1926 Total Population, Tertiary Sub-sectoral Occupational Allocation

1926 IVANOVO (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
TERTIARY	12197	7427	19624	23%	13%	18%
TERTIARY SELLERS	879	353	1232	2%	1%	1%
Other Tertiary Sellers	571	109	680	1%	0%	1%
Small traders	308	244	552	1%	0%	0%
TERTIARY SERVICES AND PROFESSIONS	8661	6695	15356	17%	11%	14%
Other Tertiary Services and Professions	41	23	64	0%	0%	0%
Food, drink and accommodation services	136	162	298	0%	0%	0%
Storage	222	7	229	0%	0%	0%
Entertainment	99	39	138	0%	0%	0%
Media	27	3	30	0%	0%	0%
Miscellaneous service industries	1287	1032	2319	2%	2%	2%
Domestic service	0	2105	2105	0%	4%	2%
Financial services and professions	1466	197	1663	3%	0%	1%
Commercial and administrative services	2820	1309	4129	5%	2%	4%
Professions	1332	706	2038	3%	1%	2%
Professional support	98	741	839	0%	1%	1%
Local government service	138	12	150	0%	0%	0%
National government service	648	9	657	1%	0%	1%
Armed forces	261	0	261	1%	0%	0%
Owners, possessors of capital	86	350	436	0%	1%	0%
TRANSPORT AND COMMUNICATIONS	2657	379	3036	5%	1%	3%
Transport and Communications	619	271	890	1%	0%	1%
Road transport (animal power)	1086	2	1088	2%	0%	1%
Road transport (motorised)	0	0	0	0%	0%	0%
Sea transport	14	0	14	0%	0%	0%
Rail transport	902	35	937	2%	0%	1%
Communications	36	71	107	0%	0%	0%
SECTORALLY UNSPECIFIED OCCUPATIONS	2865	1101	3966	6%	2%	4%
WITHOUT OCCUPATION OR UNSTATED	5880	7917	13797	11%	13%	12%
Unemployed	2255	3954	6209	4%	7%	6%
Uncertain status	3625	3963	7588	7%	7%	7%
WORKING POPULATION	32049	29571	61620	62%	50%	55%
NON-WORKING POPULATION	20034	29705	49739	38%	50%	45%
TOTAL POPULATION	52083	59276	111359	100%	100%	100%

Chart 36- Ivanovo 1926 Total Population, Tertiary Sectoral Occupational Allocation

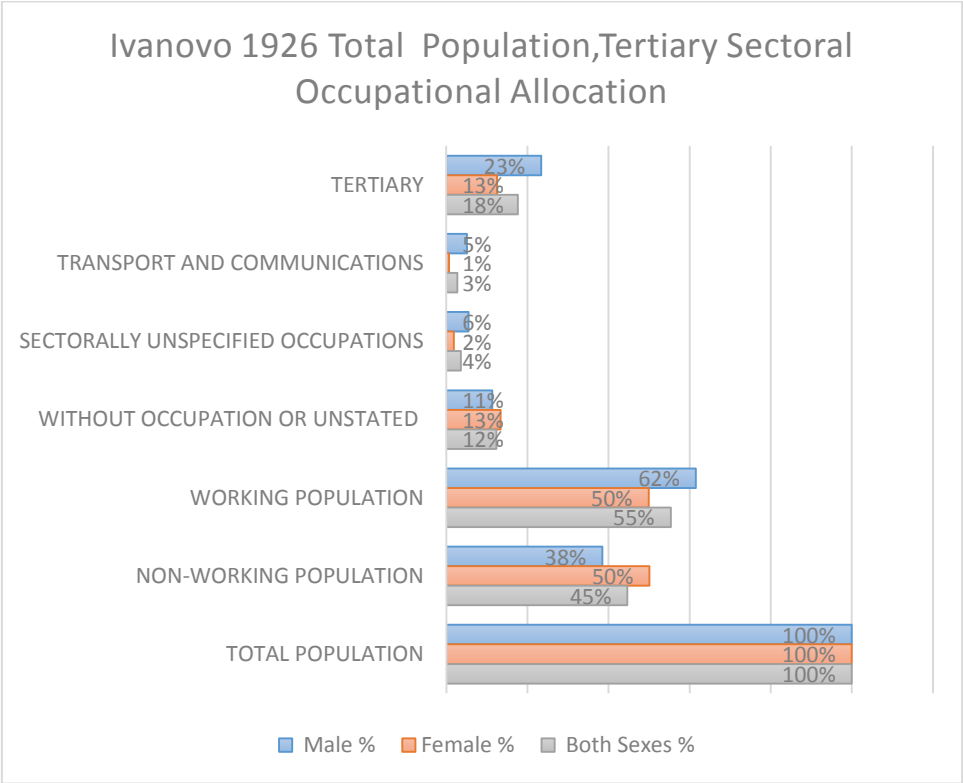


Chart 37- Ivanovo 1926 Total Population, Tertiary Sub-sectoral Occupational Allocation

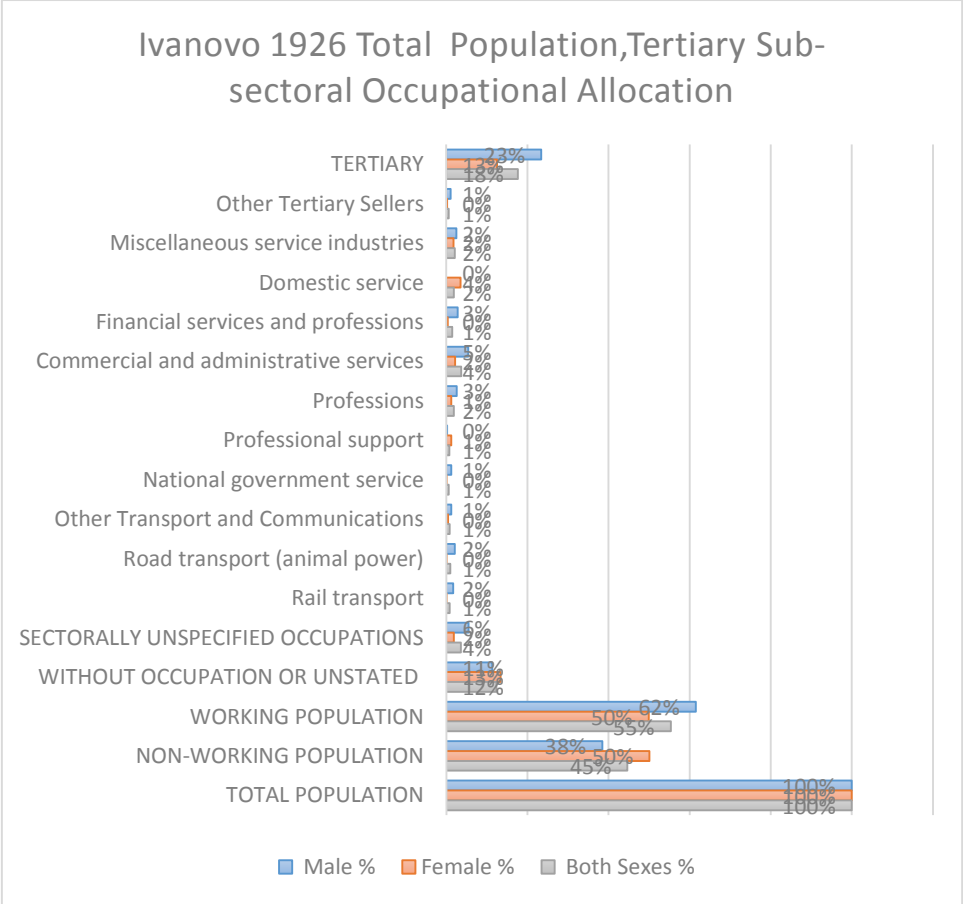


Chart 38- Ivanovo 1926 Working Population, Tertiary Sectoral Occupational Allocation

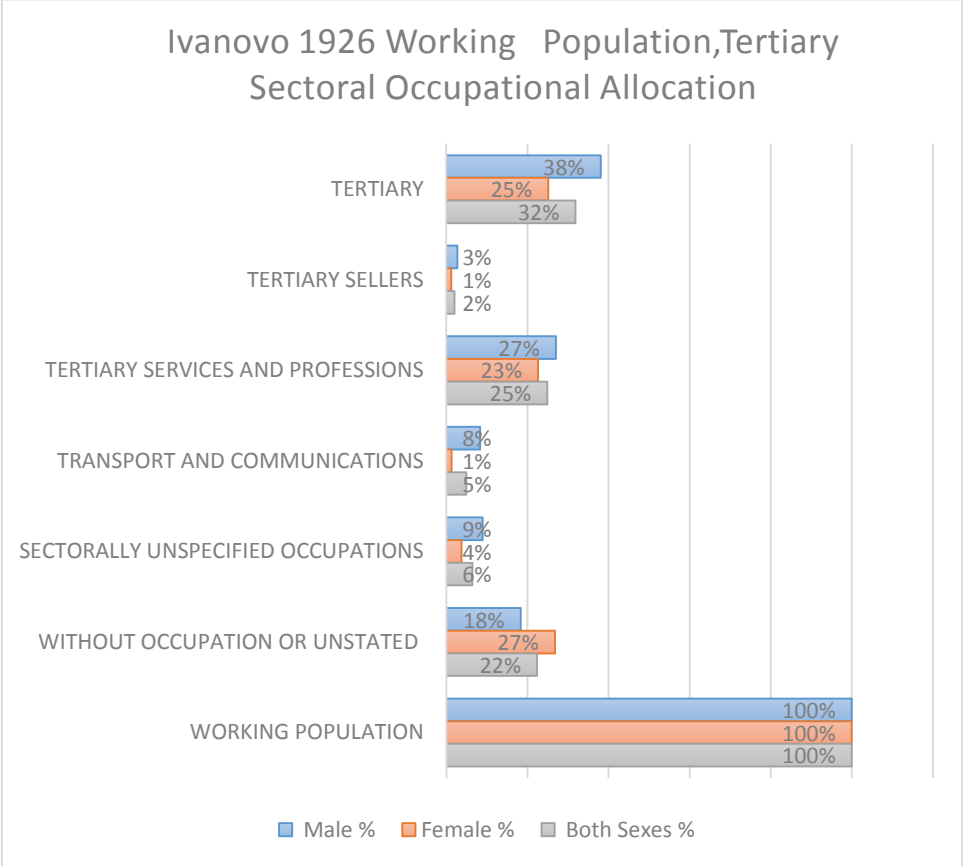


Chart 39- Ivanovo 1926 Working Population, Tertiary Sub-sectoral Occupational Allocation

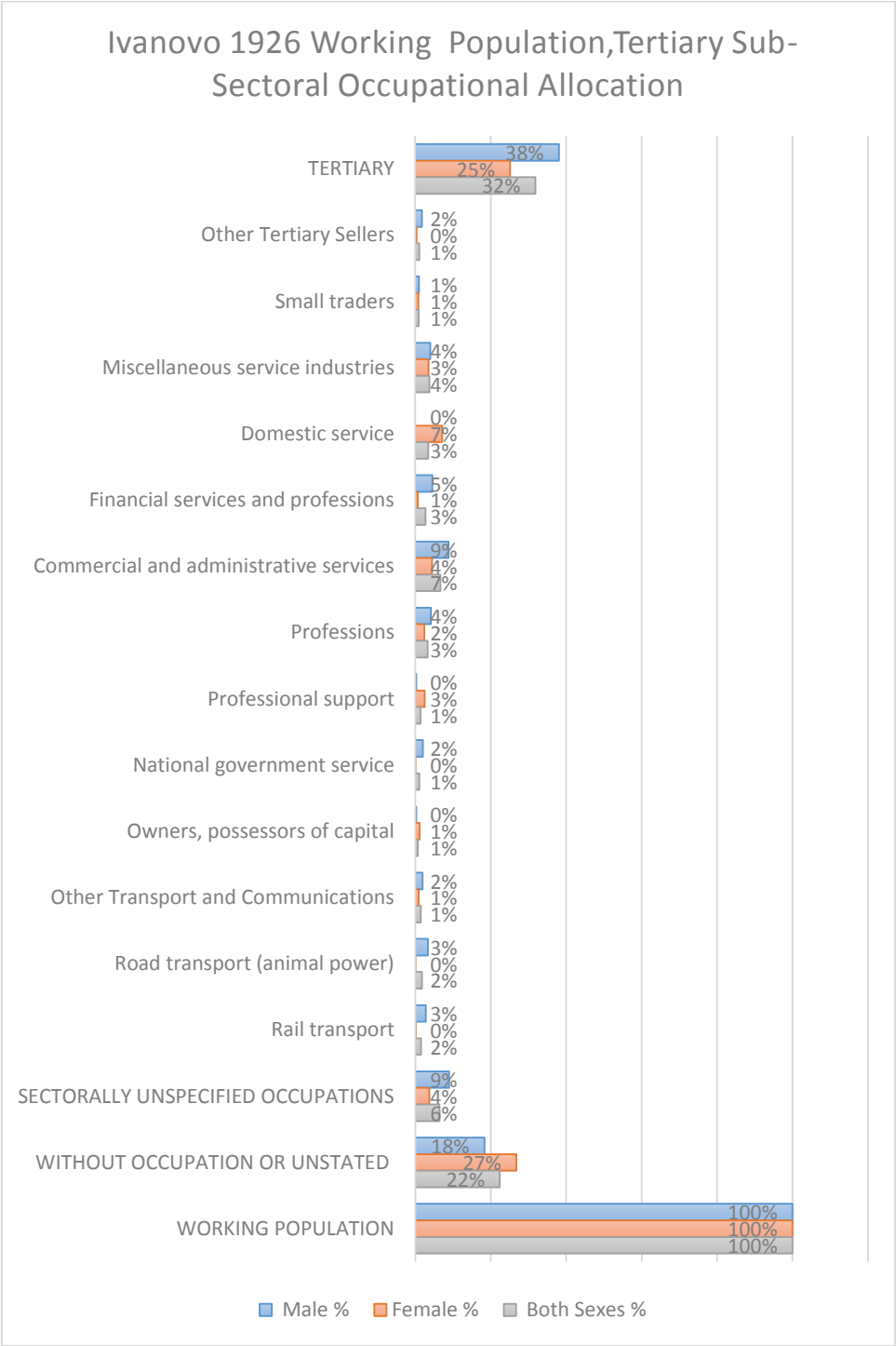


Chart 40-Ivanovo 1926 Gender Allocation within Tertiary Occupational Sectors

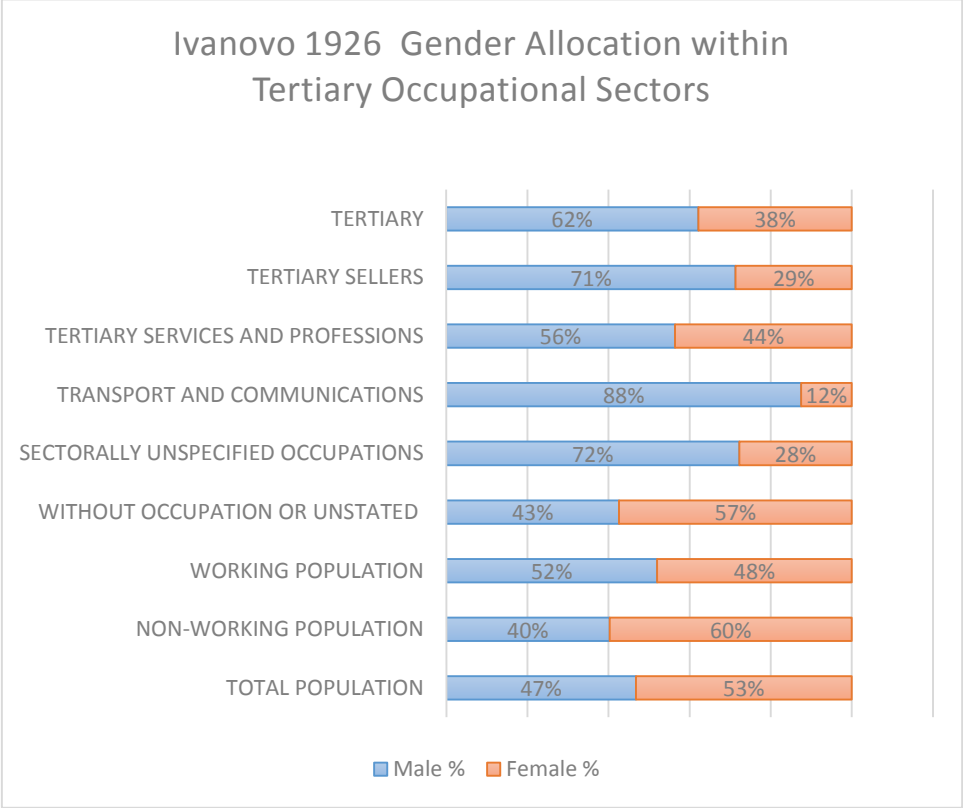
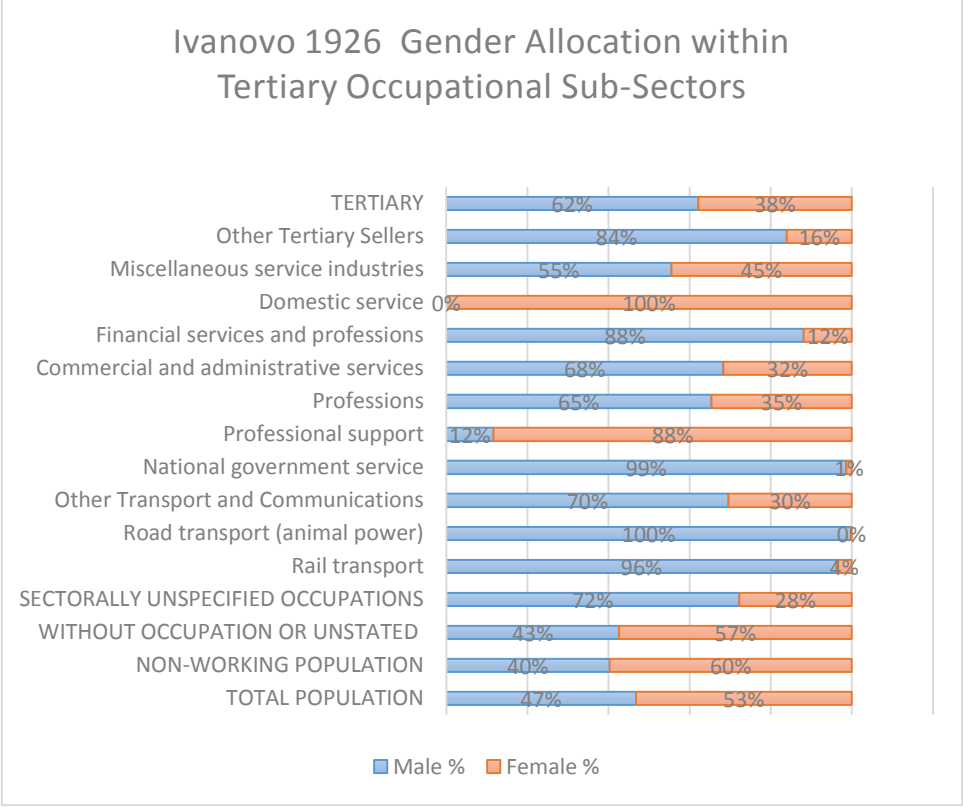


Chart 41- Ivanovo 1926 Gender Allocation within Tertiary Occupational Sub-sectors



Summary of Charts: Ivanovo 1926, Tertiary Sub-sectoral Occupational Allocation

Coming to 1926, we know from earlier part of our analysis that tertiary sector will increase its shares, especially among the male working population; both in absolute numbers as well as shares.

We could clearly observe that the domestic service loses its prominence among tertiary sector Sub-sectoral occupations, especially among males. Instead, male concentration could be found in various other tertiary sub-sectors as railway transportation as well as road transportation and perhaps most strikingly among the commercial and administrative services. To be more specific, the occupations fall into this Sub-sectoral category includes financial occupations as bookkeeping or accounting as well as unit production management or in short; more white collar activities in private and governmental institutions. These could be taken as signals of a modern industrial city in the making, led by factory production and government intervention. The commercial economy, namely occupations related with tertiary dealers, sellers, food or accommodation services or entertainment has been largely diminished in shares and one could comment that this may stem from the peculiar characteristics of New Economic Policy years.

Before 19th century, Ivanovo has in some extent, grown as a commercially strong city but especially after 1914, this picture would largely change and Ivanovo would turn into a ‘white-collar’ based city.

General Outlook: Ivanovo Tertiary Sub-sectoral Occupational Shift Between 1897-1926

Chart 42-Ivanovo 1897-1926 Total Population, Both Sexes, Tertiary Sectoral Occupational Shift

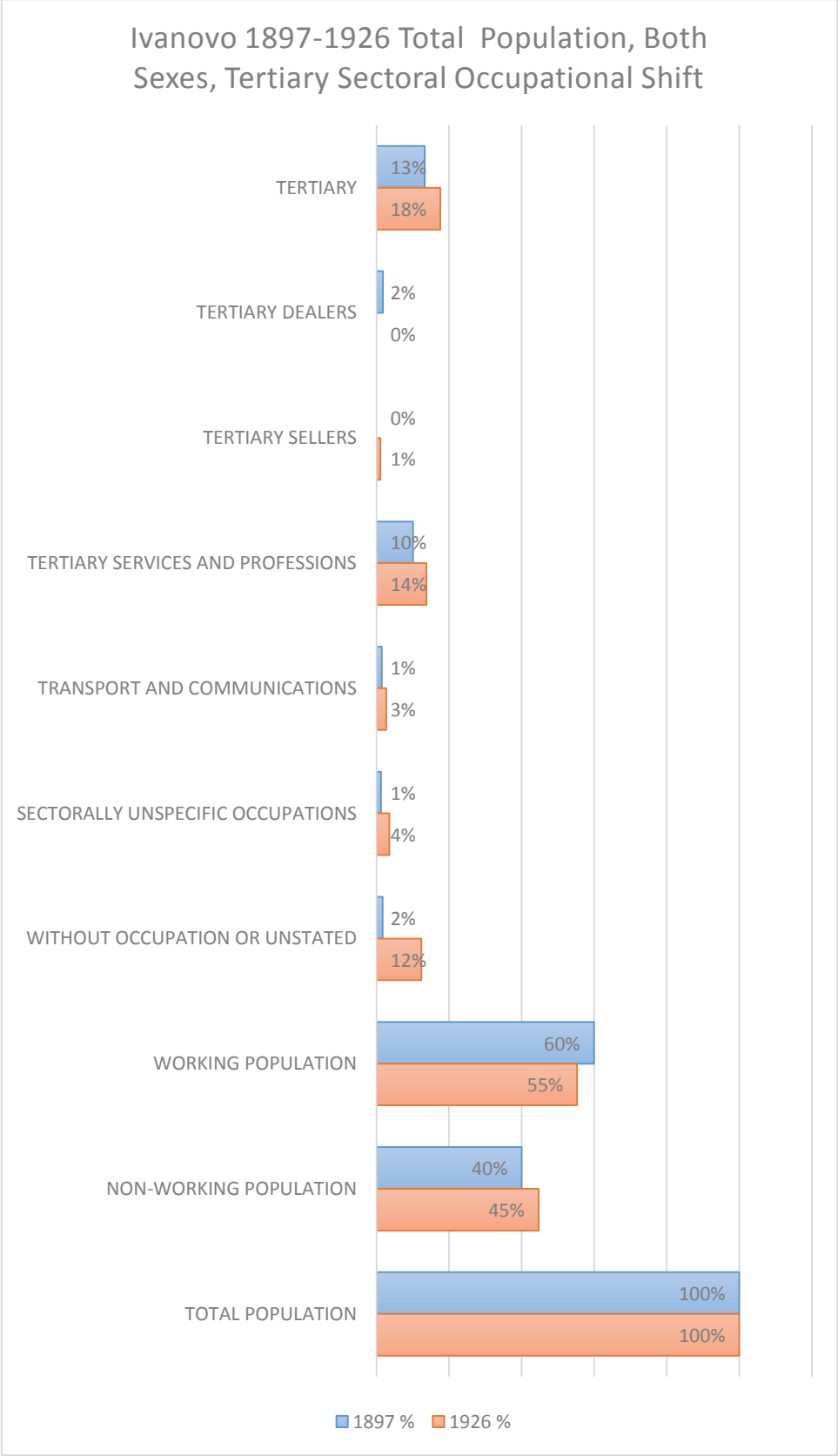


Chart 43- Ivanovo 1897-1926 Total Population, Both Sexes, Tertiary Sub-sectoral Occupational Shift

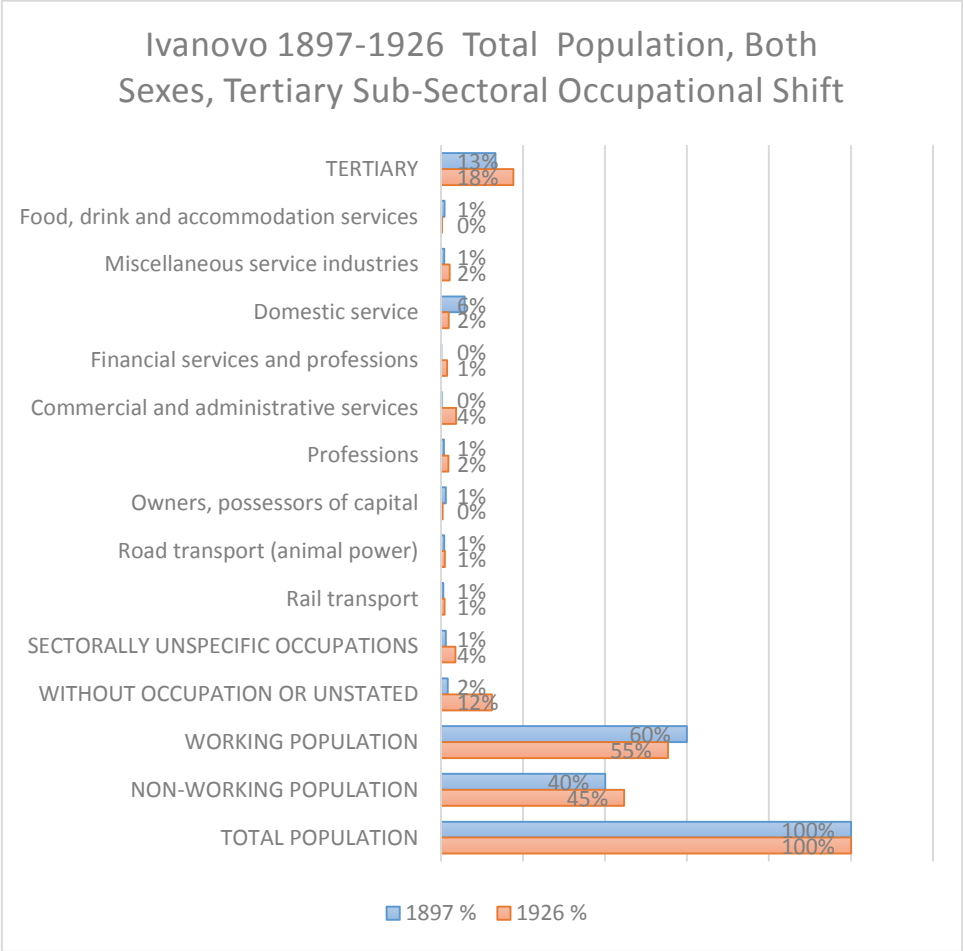


Chart 44- Ivanovo 1897-1926 Working Population, Both Sexes, Tertiary Sectoral Occupational Shift

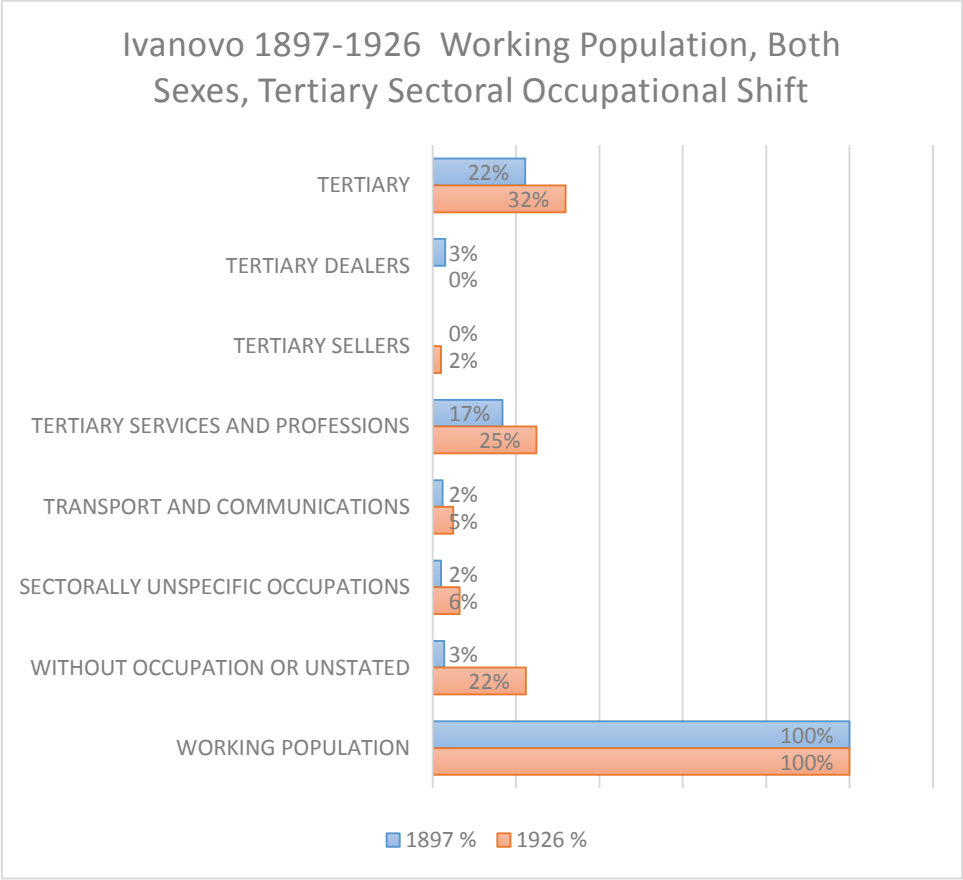


Chart 45- Ivanovo 1897-1926 Working Population, Both Sexes, Tertiary Sub-sectoral Occupational Shift

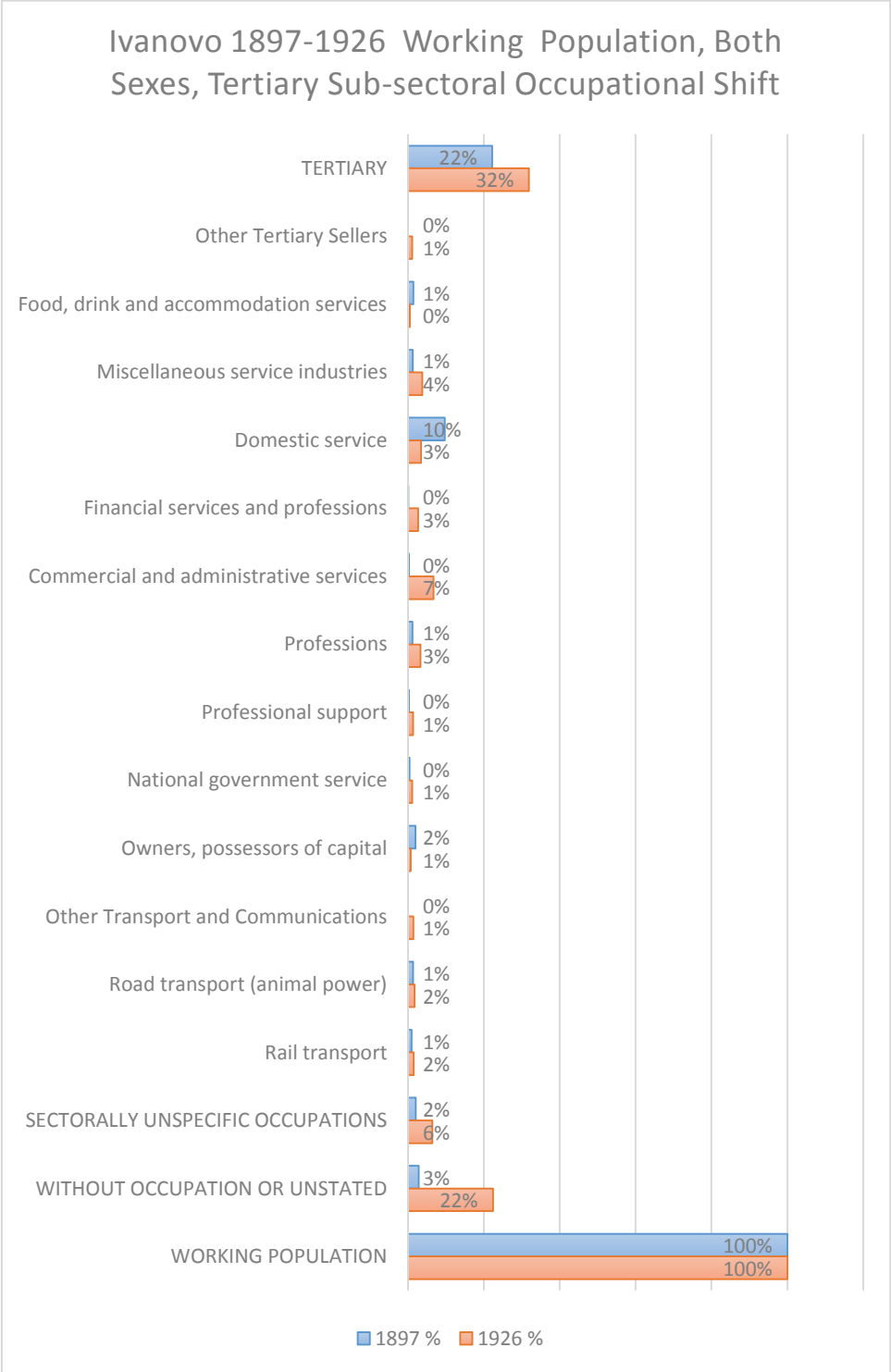


Chart 46- Ivanovo 1897-1926 Total Population, Males, Tertiary Sectoral Occupational Shift

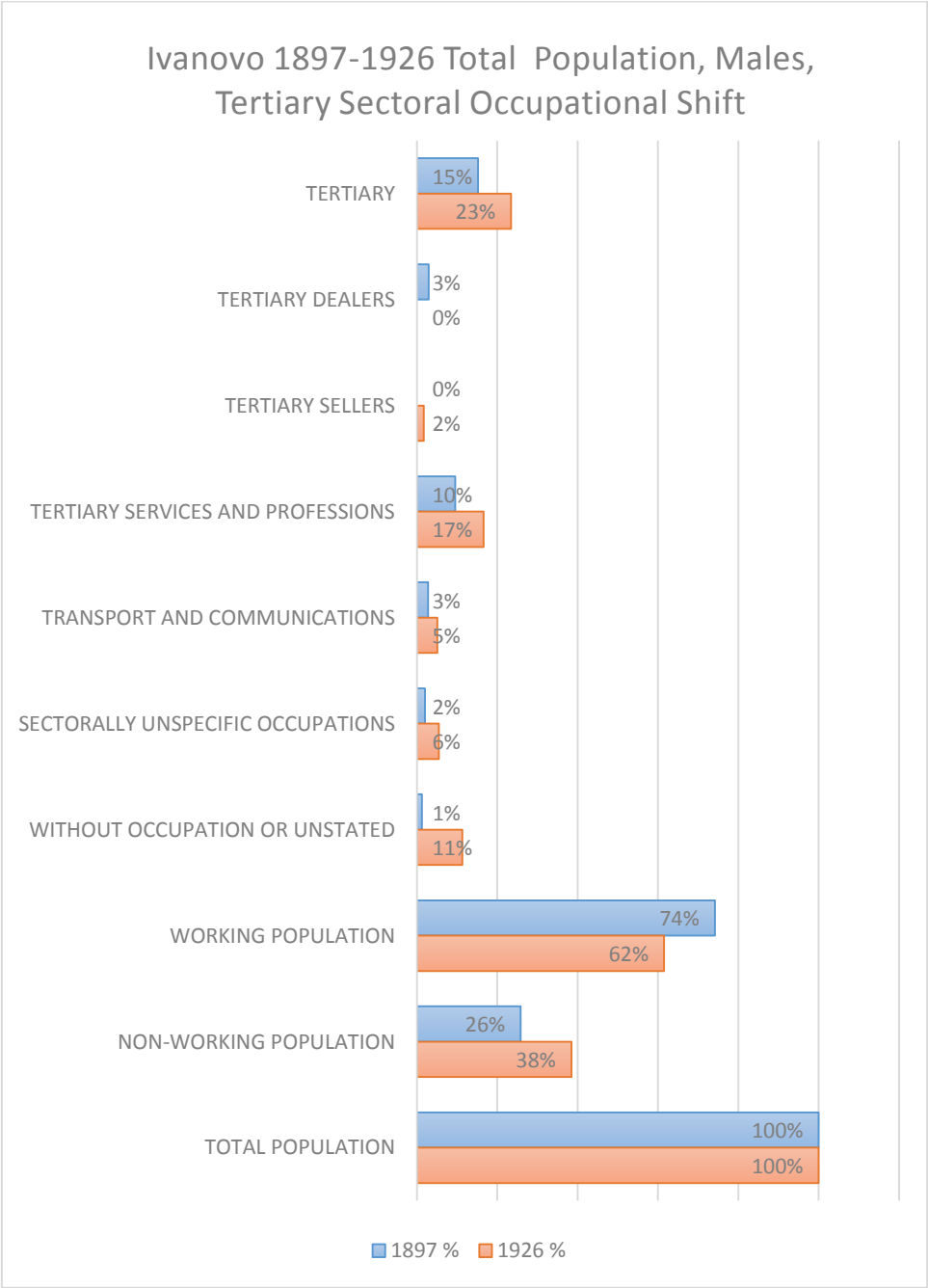


Chart 47- Ivanovo 1897-1926 Total Population, Males, Tertiary Sub-sectoral Occupational Shift

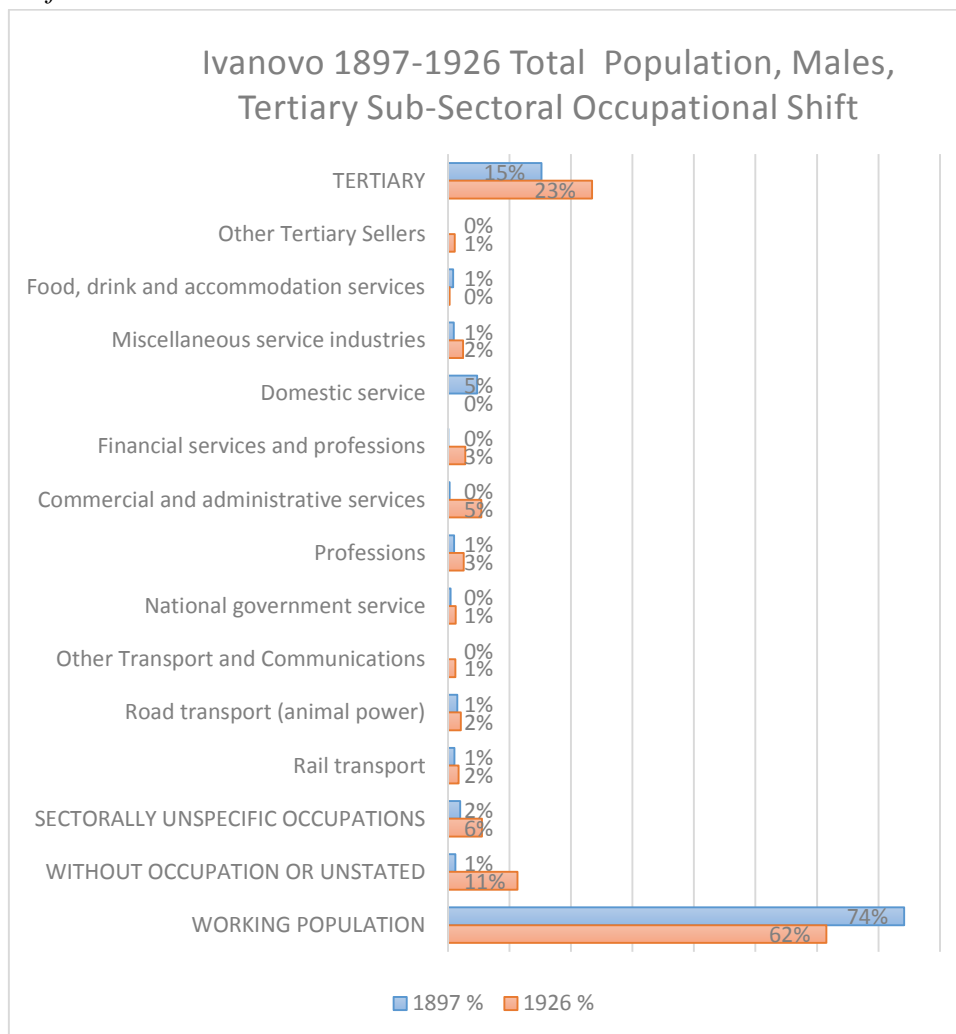


Chart 48- Ivanovo 1897-1926 Working Population, Males, Tertiary Sectoral Occupational Shift

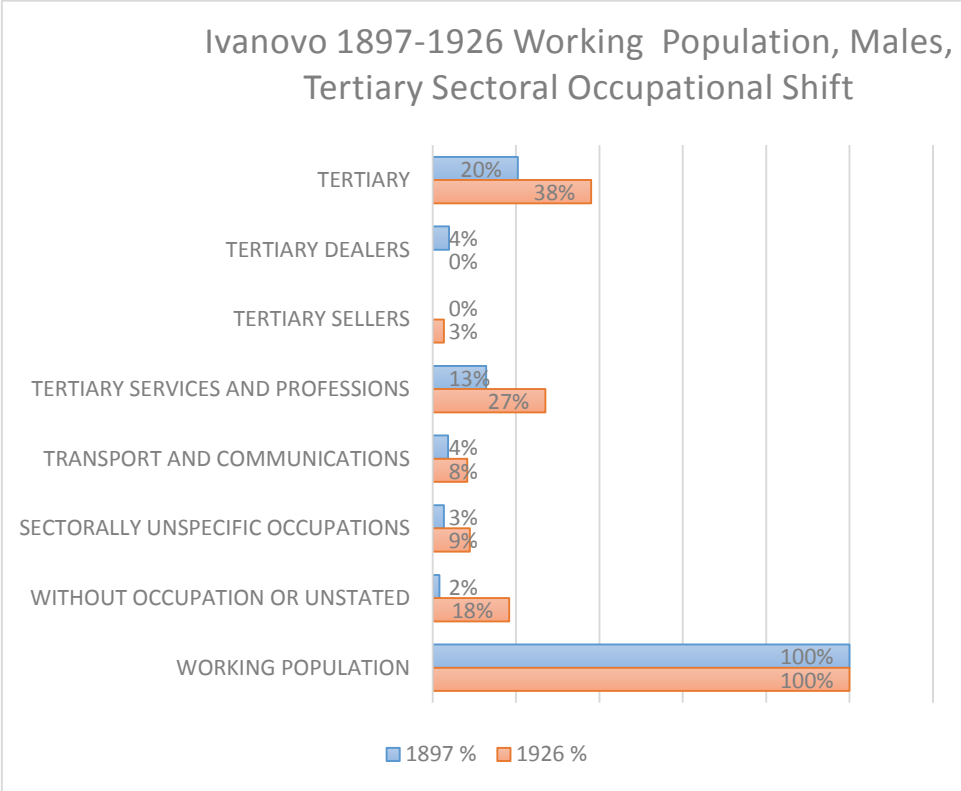


Chart 49- Ivanovo 1897-1926 Working Population, Males, Tertiary Sub-sectoral Occupational Shift

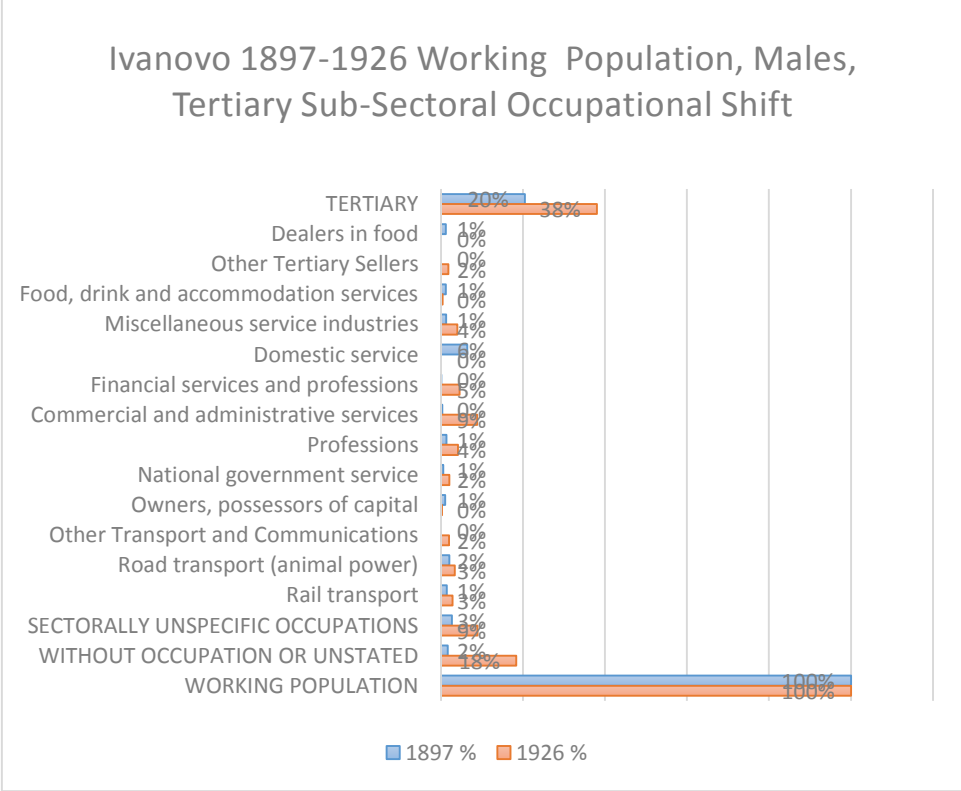


Chart 50- Ivanovo 1897-1926 Total Population, Females, Tertiary Sectoral Occupational Shift

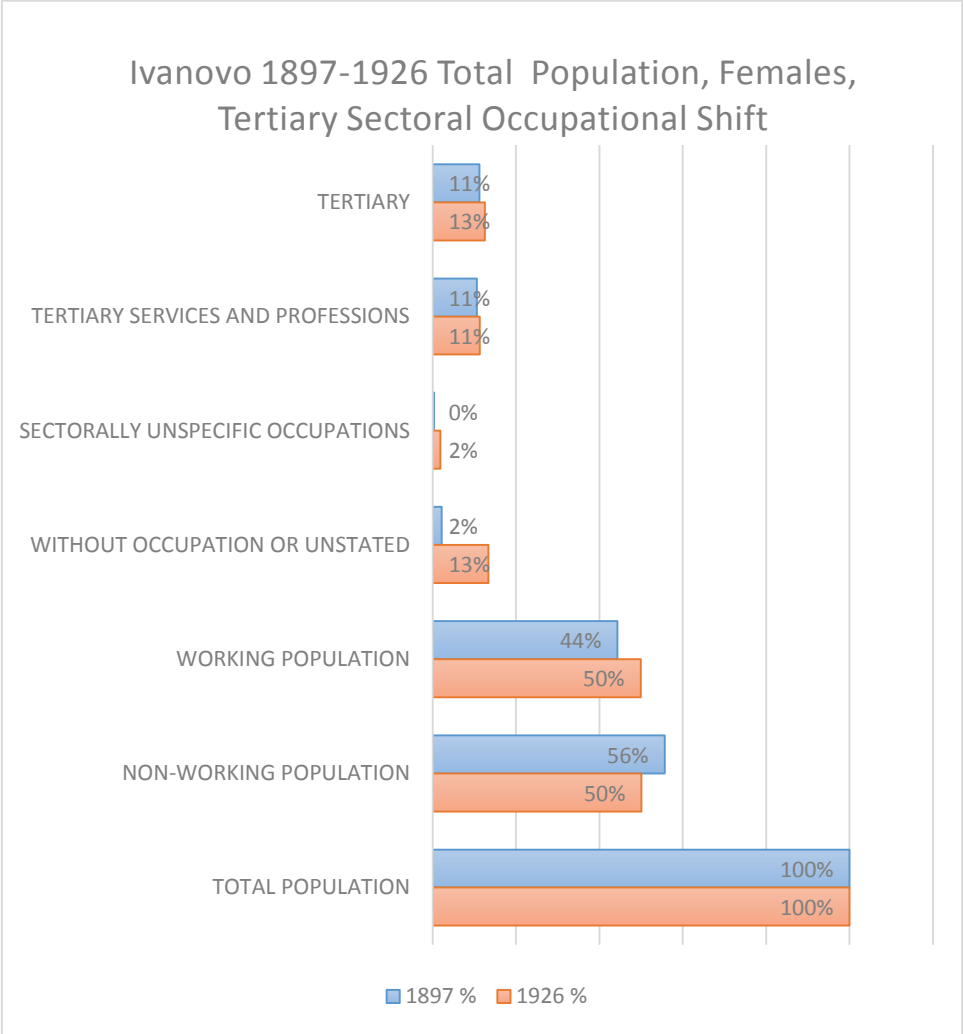


Chart 51- Ivanovo 1897-1926 Total Population, Females, Tertiary Sectoral Occupational Shift

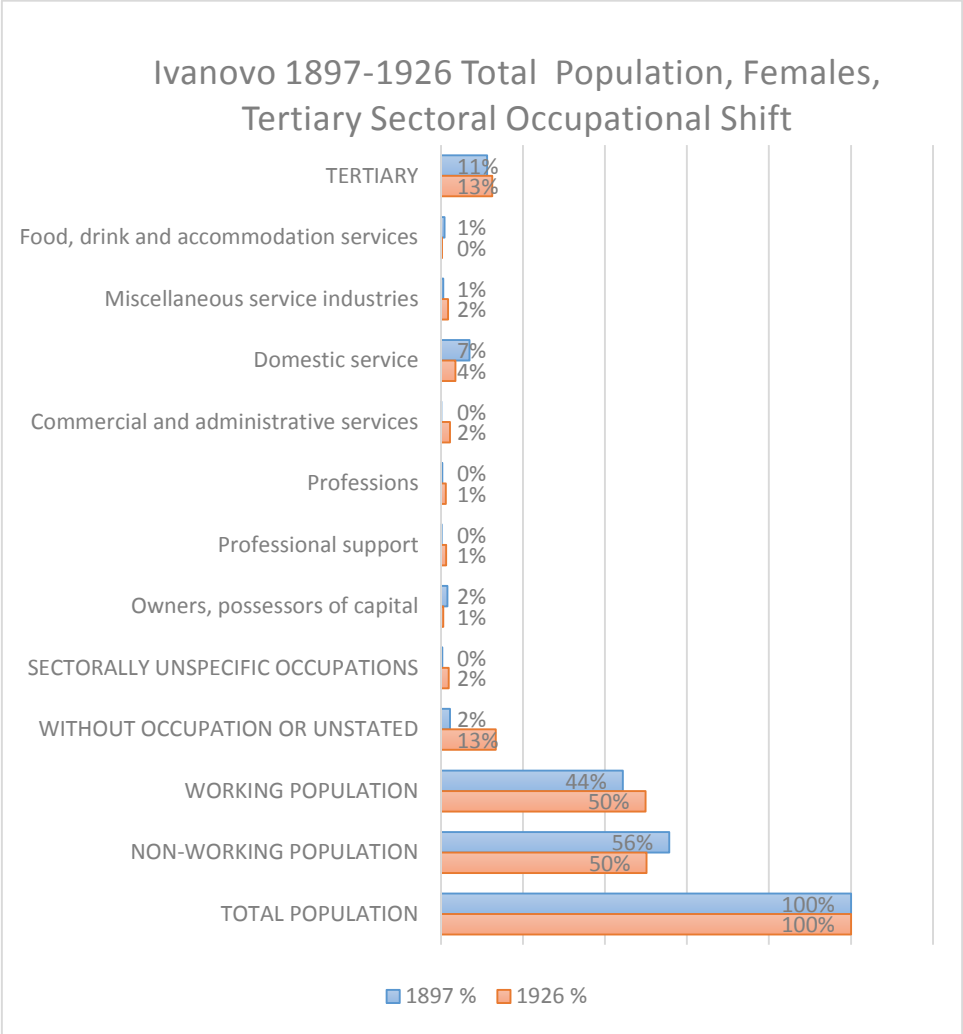


Chart 52- Ivanovo 1897-1926 Working Population, Females, Tertiary Sectoral Occupational Shift

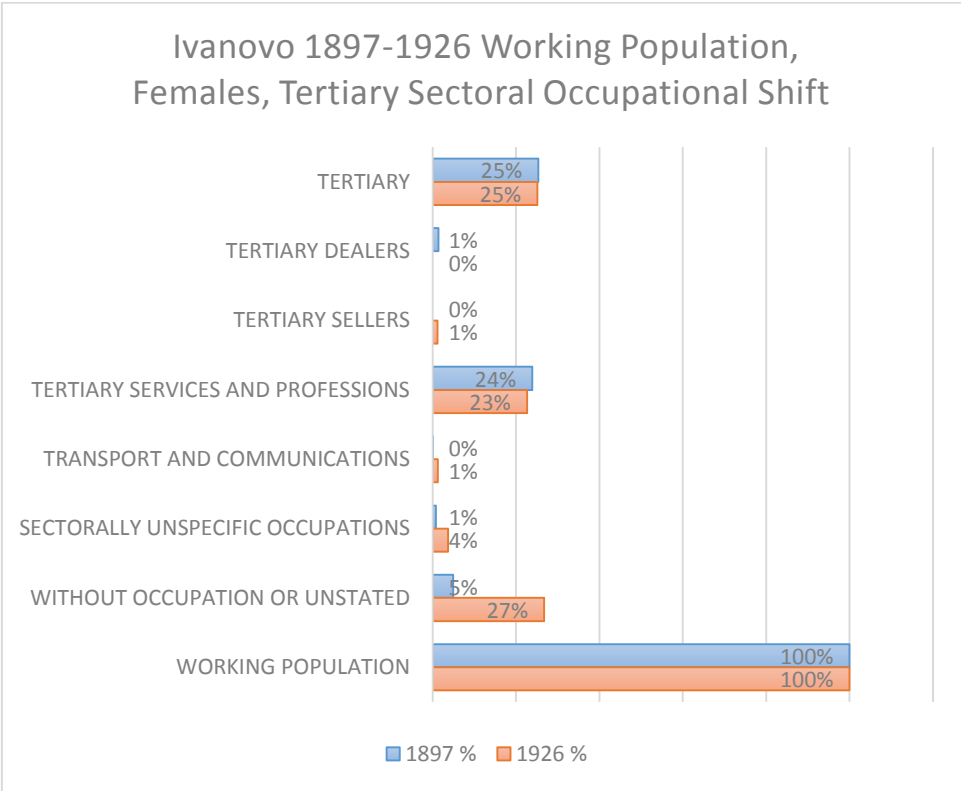
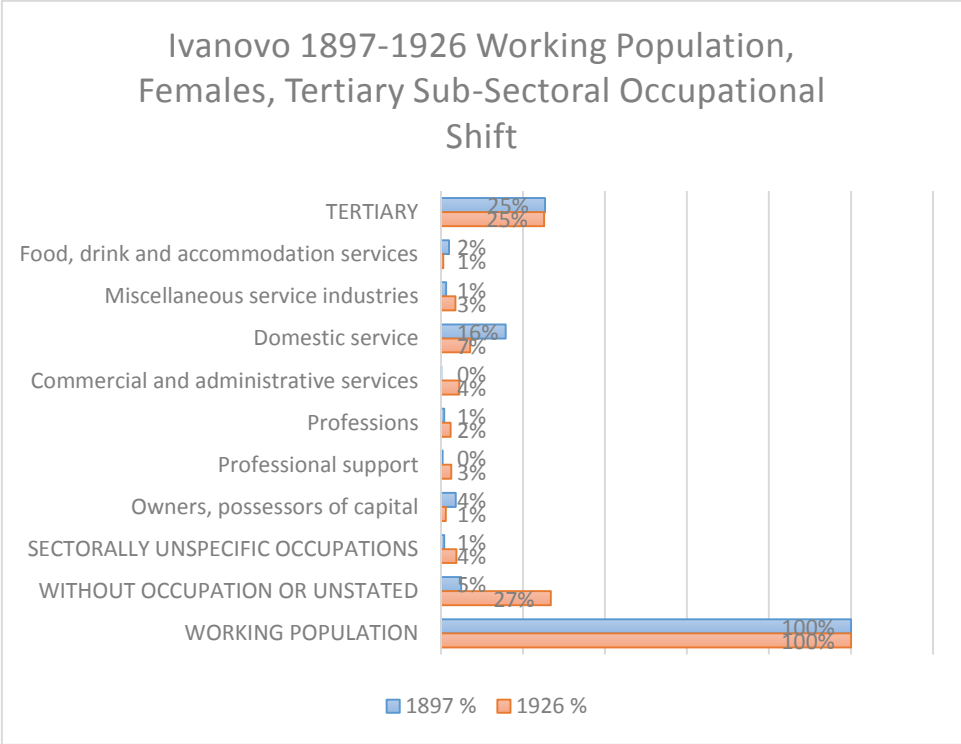


Chart 53- Ivanovo 1897-1926 Working Population, Females, Tertiary Sub-sectoral Occupational Shift



Summary of Charts: Ivanovo 1897-1926 Tertiary Sub-sectoral Occupational Allocation

If we recall once again, according to 1897 Census records, tertiary sector appear as more prominent than primary sector but less prominent than secondary sector. Within tertiary sector, tertiary services and professions led the sectoral distribution due to strong female presence in the domestic service. Domestic service stood as a prominent tertiary Sub-sectoral occupation for also males but the male concentration was not as high as females.

During 1897 and 1926, tertiary services and liberal professions has the largest improvement in terms of shares among all other tertiary occupational sectors, arisen from %22 to %32 in working population (both sexes combined) and moreover, triples in numbers, from 5442 to 15546. However, this rise was no longer based on female occupational concentration on domestic services but more white-collar based occupations concentrated around factory and governmental institutions as ‘commercial and financial activities’. Among other tertiary transport and communications sectors, also has improved in numbers, 790 to 3036 as well as shares, %2 to %5 (among all working population) whereas the dealers and sellers among tertiary sector activities diminishes in shares. Clearly, between 1897 and 1926, Ivanovo had a strong rise in tertiary sectors; a rising white-collar related occupations as well as liberal professions as doctors or university instructors but less commercialized open market economy activities as tertiary dealers and sellers.

Discussion: Occupational Transformation in Ivanovo between 1897-1926

In this part, I would like to discuss more on the results obtained from our analysis. Firstly, I would like to start with the reliability issue regarding both census records: in what extent these census records are eligible to lead us robust suggestions on the industrialization and occupational transformation? Secondly, I would like to elaborate more on the results obtained in the framework of industrialization-occupational transformation nexus. What does our results tell us on the industrialization of Ivanovo and the relevant occupational transformation throughout 1897 and 1926?

Looking at our analysis, firstly, we need to assess the reliability of our sources at hand. We must acknowledge that regarding 1897 census registers and the relevant analysis, the results relating to male working population is much more reliable than females ones. If we look at the difference between 1897 labour participation rates between males and females, %74 and %44, there is a clear indication of a methodological flaw in the 1897 census records, such a big gap is not convincing. What is more, a working rate of %44 (for females) would not provide a very rich occupational structure insight.

The big gap between the labour participation rates is worth noticing and needs to be addressed. The issue could be related with the different methodology and approach that the census-takers in 1897 and 1926 have embraced. For instance, the issue of ‘working population’ could provide us an explanation.

We know that in 1926 Census, the census takers automatically put persons below 10 years old into 'non-working' category. Since 1897 Census takers did not follow a clear-cut methodology for this issue, it is probable that male working population was overestimated i.e. an eight year old boy, who was providing support for work, undertaken by family members only has been taken as a member of 'working force' while this was not the case for the female member of the same family. When under-aged male population has fallen into 'non-working category' in 1926 Census registers, male labour participation appears to be decreased. However, this is an explanation also has a drawback: as we have indicated in the methodology chapter, the number of males who were younger than age of 10 were covering almost 75% of all 'non-working' male population for Ivanovo.

This brings us to the inference that the newly introduced age category in census of 1926 might not be extensively powerful to change labour participation rates. However, one must keep in mind that the methodological differences between 1897 and 1926 census taking processes are not confined to age limits only but also the way of classification changes. Therefore, females who were not included in 'working population' in 1897, not because they were below a certain age but because they are not the main income source of the household or do their work in their houses, not workplace; could now be included in working force. Although not being fully reliable, this explanation is worth consideration.

In addition to that, it could be the case the male figures were overestimated since census takers had a difficulty registering seasonal and intermittent labour work force correctly. Since the Census 1897 was taken in winter time, seasonal in-migration was active and therefore, led to

overestimation of male population in the city. Since most of the seasonal in-migrants were male, they had a higher share in both working and total population.

In relation with the methodological issues, one could also notice that between 1897 and 1926, share of 'sectorally unspecified occupations' as well as 'without occupation or unstated', especially among females, has been increased. This might be another indication of methodological issues is that I have mentioned above. There are way more higher females who were recorded under 'without occupation' title than males while female labour participation rate is on the rise and probably, the females who were previously recorded as 'non-working' members are, by 1926 census takers, registered as the part of working population despite the fact that they have no occupation.

In summary, we must keep in mind this issue of reliability issue in our mind at all times regarding the results obtained from 1897. There could be overestimations regarding the males figures while underestimations regarding female figures

Leaving methodological issues aside, I would like to proceed to our exploration on Ivanovo, within industrialization-occupational transformation framework. Regarding the city of Ivanovo in the scope of this thesis project, there would be two points depicted from earlier literature on the city that we could find a meaning in our framework. One of them is the well-documented textile base of Ivanovo and its relation with industrialization-urbanization nexus. Accordingly, the industrialization have already started in Ivanovo in the beginning of 19th century and how would this be reflected in the population and occupational figures could be a relevant question.

The second point would be on the ‘crisis and recovery’ aspect of the textile industry and it would be about the general economic stagnation that has taken place in Russia within the first ten years of 20th century. How this economic stall did would be reflected in the population and occupational structure would be another important question.

We know from earlier parts of this subsection that Ivanovo largely remains as a textile town between the years 1897 and 1926. The dominance of the secondary sector on the whole occupational structure was emphasized in the summary of charts throughout this period. Firstly, we need to consider very specific conditions that give rise for Ivanovo manufacturing sector, in a more focused way, cotton textiles industry to prosper in a large extent. This might provide help to understand the resilience of textiles in the city between these two census years.

According to Tugan-Baranovski, the defining roots of this manufacturing-based structure has started to take shape, especially after Napoleonic Wars while Moscow fire and the destruction of city 1812 led the residents of the city to find other solutions. Therefore, the possessional¹⁴⁴ peasantry or serf craftsmen to nearby Ivanovo, who managed to grasp skills and required knowledge in order to manage a manufacturing business in big cities, carried on the industrial activities, in the nearby Ivanovo village.¹⁴⁵ According to this account, Ivanovo had a geographical advantage: it was close to Moscow hitherto being the centre of textiles and Moscow was left in tatters during Napoleonic Wars.

¹⁴⁴ ‘Possessional’ in the sense of the peasants were not ‘free’ as a factor of production and remains under limiting obligations of serfdom.

¹⁴⁵Tugan-Baranovskii, *The Russian Factory in the 19th Century*, 161; Crisp, *Studies in the Russian Economy before 1914*, 15.

Without a doubt, external factors were not the only ones for Ivanovo to become a textile town. There were other factors for this occupational structure to be formed: state aid, in the form of tariff protection introduced in 1822¹⁴⁶ as well as abolishment of British ban on exporting technology in 1842¹⁴⁷ helped. Vladimir gubernia further aggravate its strong share in manufacturing as especially cotton weaving. The technological revolution in England was also effective since the Russians were able to import cheap yarn those were produced in Britain and built a spinning industry on it. William Blackwell underlines the technology transfer from Britain and how important it was to bring Ivanovo into the prominence within textile production. By 1850, Ivanovo became a “purely industrial town”; containing 5,355 workers in 105 factories where many of them were small. In 1858, Vladimir, in terms of cotton weaving industry, was only second to Moscow. ¹⁴⁸ As Vorderer puts it: “*Cotton cloth printing, weaving, and to a lesser extent, spinning were the dynamo of the Ivanovo-Voznesensk economy.*”¹⁴⁹

Results obtained in our analysis also verifies the claim that strong secondary sector base which has been formed almost by mid-19th century, led by textiles sub-sector. Primary sector does not appear to be an important sector regarding occupations while tertiary sector is fledgling. Urbanization rates, that is, Ivanovo city population was also on the rise and males were having majority within the total population. All these points to the direction that Ivanovo industrialization reminds us a ‘stereotypical Western type’ industrialization: urban centre has become the attraction centre of secondary sector and with a limited extent, tertiary sector. Earlier literature tells us that urbanization and industrialization went hand in hand before the turn 19th century and our occupational analysis does not deny it.

¹⁴⁶ Ekzempliarskii, P. M. *Istoriia goroda Ivanova*. [Ivanov]: Ivanovskoe knizhnoe izd-vo, 1958. p. 52

¹⁴⁷ Vorderer, “Urbanization and Industrialization in Late Imperial Russia,” 36.

¹⁴⁸Ibid.

¹⁴⁹Ibid.292.

As for the second prominent aspect regarding the late 19th and early 20th century industrialization of Ivanovo was the crisis and recovery. We know that between 1900 and 1903 as well as 1904 and 1908, Russia was undergoing a deep economic crisis with the impact of global depression with its own peculiarities.¹⁵⁰ The economic stagnation by the 20th century was common in all over the place in Russia as Khromov notes that at the turn of the century, due to over-production in industry and over-exploitation of tax capacity of agriculture.¹⁵¹ During this 10 year stagnation, all industries, especially manufacturing was severely influenced and Ivanovo was no exception. As a reaction to the deteriorating conditions in the textiles factories, most enterprises were either shut down or they slowed the process down. Between 1906 and 1908, the number of employed workers who had their occupations in the factories, decreased by an increasing rate. (1.3% less in 1907 than 1906 and %4.2 less from 1907 to 1908)¹⁵² During 1908 and 1914, the total shares of textiles in the factory labour force fell down from %36.5 to %30.¹⁵³ The partial recuperation in in 1910 was short lived and towards 1913, a new wave of decline in the sector has started.¹⁵⁴

On the other hand, the crisis and its effects on the cotton textiles industry should not be overestimated because by 1913, cotton textiles was still having the largest share in Russian industrial sector; almost %90 of the production was made in Central Industrial Region.¹⁵⁵ Nevertheless, textiles industry was fragile and dependent on the consumer demand and subject to fluctuations. Between 1917 and 1926, textiles were near collapsing and in the end, managed

¹⁵⁰Liashchenko, *History of the National Economy of Russia, to the 1917 Revolution*, 647–668.

¹⁵¹Khromov, *Industrializatsiia Sovetskogo Soiuzza*; cited by Fedor, *Patterns of Urban Growth in the Russian Empire during the Nineteenth Century*, 106.

¹⁵²Vorderer, "Urbanization and Industrialization in Late Imperial Russia," 334.

¹⁵³Crisp, *Studies in the Russian Economy before 1914*, 34.

¹⁵⁴Vorderer, "Urbanization and Industrialization in Late Imperial Russia," 335.

¹⁵⁵Christopher Ward, "Textile Industries," in *From Tsarism to the New Economic Policy: Continuity and Change in the Economy of the USSR*, ed. R. W. Davies (Ithaca, N.Y: Cornell University Press, 1991), 160.

to stand up again.¹⁵⁶ For our purposes in this thesis project: how did these crisis conditions effect the occupational transformation in the city of Ivanovo? How do our results on the occupational structure tell us about the economic depression times? In what ways did this ‘crisis and recovery’ reflected in the occupational structure?

In order to provide an answer to this question, we need to start from the population growth and composition. Between 1897 and 1926, in the city of Ivanovo, total population almost doubled. If we suggest that that urban city population could be used as a proxy for urbanization, we could argue for a high rate of urbanization for the city of Ivanovo between these years.

On the other hand, while the city population has been increased, the working population for both sexes considered also rose but this growth was not as strong as growth in the total population. As a result, labour force participation has been decreased, when both sexes considered. However, there were significant differences between the labour force and total population growth rates between the two genders: While females rising on the working population and end up with a larger labour participation, the case was just the opposite for males. In the end, the city total population have transformed into a female dominated form while among working population, both genders are allocated more evenly.

The rising figures of female working population and the falling figures of male working population could be stemming from methodological reasons regarding the census taking procedure, as I have mentioned in the beginning of the discussion part.

¹⁵⁶Ibid., 161–163.

Nevertheless, this explanation does not provide an answer to the question why total female population outscored total male population and the city has become a female-dominated city regarding total population gender breakdown. At this point, he must appeal for the industrialization-urbanization nexus studies and look at the scheme within this perspective.

One explanation is the connection between migration and urbanization dynamics. Accordingly, since Ivanovo was exposed to high in-migration in late 19th century, especially during 1880s and 1890s due to factory employment opportunities provided as an urban centre. Most of in-migrants were males and this might have turned gender imbalance on the side of males regarding 1897 census records.¹⁵⁷

According to Bater, this was a very common trend among the relatively more industrialized and urbanized urban centres, even though they would not be comparable in economic scale with the capitals Moscow or St. Petersburg. Nevertheless, we could observe that almost in all cities which have a large industrial role –light or heavy- within national economy, males has a larger amount of share within total population, especially in the end of 19th century. More than that, Vorderer notes that since it was the males who were finding working opportunities in the factories within the city centre while females were inhabiting in the rather peripheral areas; the since jobs they were offered were there. Later on, this disparity have been lessened. Vorderer suggested that the more city economy grew, more demand for female workforce in a more complex economic occupational structure. In addition to that, factory mechanization eliminated the need for male workforce for certain jobs and females were also become available for factory production¹⁵⁸

¹⁵⁷ Vorderer, “Urbanization and Industrialization in Late Imperial Russia,” 125–128.

¹⁵⁸ James H. Bater, *Urban Industrialization in the Provincial Towns of Late Imperial Russia*, The Carl Beck Papers in Russian and East European Studies ; No. 503 (Pittsburgh: Center for Russian and East European Studies, University of Pittsburgh, 1986), 21 see Table 5.

Meanwhile, it would not mean that females were not stable on the rural side while males were migrating and they were, as well as males, joining the migratory pattern, albeit in a smaller scalar compared to males. Perhaps, within the urbanization process, city families being formed in the city of Ivanovo between the two census years and this would be another reason. ¹⁵⁹

In connection with the question we asked whether the crisis conditions in the first ten years of 19th century we are in position to make one remark from the population aspect. Apparently, the city of Ivanovo population was rising in an accelerated rate between 1897 and 1926. It is surprising to observe that such an increase took place in Ivanovo, not the city was experiencing the most intense growth in terms of economic activity (the rise of textile industry, beginning of 19th century towards mid-19th century) but while the city, in terms of economic development, went into a relatively stagnant period at the turn of the century. As a city, whose economy was based on a demand-oriented industry like textiles, despite the fluctuations in the global as well as domestic market, nevertheless, Ivanovo, as an urban centre, has experienced very high population growth rates. For Susan Vorderer, constantly growing population was mostly stemming from influx from other provinces or rural settlements. ¹⁶⁰ ‘Natural increase, i.e. low death and high birth, played a very limited role.

This puts a widely accepted presumption about industrialization and urbanization into question, once more. The highest rates of urbanization in Ivanovo did not take place while the trademark industry of the city, the textiles manufacturing and clothing were developing with their highest pace within 19th century. Earlier, Lewis and Rowland have found evidence that the

¹⁵⁹ Vorderer, “Urbanization and Industrialization in Late Imperial Russia,” 127.

¹⁶⁰ *Ibid.*, 120.

urbanization-industrialization nexus was weak between 1897 and 1926. According to Lewis and Rowland, enhanced transportation possibilities led the urbanization process.¹⁶¹ We could consider this study to provide a partial explanation for our specific case where high rate of urban growth in the city of Ivanovo was not stemming from the pull effects of a growing city industry but enhanced transportation possibilities might have played a role for the rural population to migrate to local centres like Ivanovo, even though the rewards remain limited.

With this remark, that the highest increases in urban growth for the city of Ivanovo happened during the 1897-1926 era where the heart of city industry, the textiles were relatively slowed down could be exposed to a counter-claim. Could it be the case that due to various reasons, the textile industry has left the city centre and moved production process to rural parts in Vladimir region? This would be an appropriate enquiry since in the Chapter I, we have indicated that industrialization process does not have to take place only in the urban setting but also, in a rural setting as well. In order to give a proper answer to this question, we would need a regional focus on the Vladimir gubernia but as far as the literature on the textile industry in Ivanovo during 1897-1926 suggests, there was no such process.

At this point, the next question should be how did the population changes were actually reflected in the occupation structure? As I have indicated in the 'population' sub-section, the census records tell us that female total and working population was on the rise between 1897 and 1926. The rising female working population, however, does not indicate an occupational transformation trend regarding the sectoral occupations. Many of the newly joined female

¹⁶¹ Lewis, Robert A., and Richard H. Rowland. "Urbanization in Russia and the Ussr: 1897-1966." *Annals of the Association of American Geographers* 59, no. 4 (December 1969): 776–96.

workforce have been added to *without occupation* title. Meanwhile, for males, the situation is just the opposite of this trend. While the labour participation rate of males was declining, males are more likely to have occupations under tertiary sector than secondary sector.

This brings us to the point that between 1897 and 1926, we could suggest that the trend of occupational transformation where secondary sector would lose some of its overall share to tertiary sector, but this transformation is only restricted to male population. No such remarkable trend among the females have been depicted.

Differences in sex ratios within the occupational structure could also lead us to some conclusion about the economic developments within the city. Vorderer makes difference between skilled workers and unskilled workers and how the occupations of these two groups could change in time. For instance, skilled workers were generally in mechanical or some printing departments within the factory while unskilled workers were concentrated on weaving and spinning.¹⁶² Vorderer notes that alternative occupations for females out of the factory work were barely lucrative, therefore, female, which here stands as unskilled labour, who wanted to earn a living had not much change to either become a weaver in the factory for low pay, or end up with some miscellaneous minor service occupation as a domestic servant.¹⁶³

If we recall that in time, females were further dominating the textiles sector and in the end of 1926, there were actually more females who were indicated as having textile occupations than

¹⁶²Vorderer, "Urbanization and Industrialization in Late Imperial Russia," 498.

¹⁶³Vorderer, "Urbanization and Industrialization in Late Imperial Russia," 506.

males, one another explanation is the following: Throughout the development of factory production and hence mechanization of production process, the need for muscle or hard work provided by male, lowered. Females, who were now migrating into the city, at least as much as males have risen in population and started to replace males for some specific occupations within the workplace, due to obvious and advantageous supply/demand conditions; they were simply more eager to work for lower wages. Despite the attempts of some male workers who were afraid of losing their relatively advantageous position within the factory to reverse this process, within the factory production, female workers have increased more and more in time.¹⁶⁴

One another explanation could also be related with the crises: with a rising migration rate, female workers, who wanted to a part of secondary sector were more eager to accept lower wages. During the crisis, the factory owners might have wanted to exploit the cost minimization opportunity to hire women instead of men into the factory place. Vorderer notes that such methods were employed.¹⁶⁵

Instead in 1926, males are predominant having more factory-like occupations; fuel industries, building and construction or machine building. Regarding females, the situation is just on the contrary; among female who has secondary sector occupations, there is an increasing tendency among them, to have an occupation within textile sector.

¹⁶⁴Ibid. 509–510.

¹⁶⁵Ibid.334.

This is, of course an important sign of urbanization and economic growth. If we look at the general composition of this rise in the tertiary sector, we would notice the specific rises in the transport and communication services as well as considerable increases in administrative, commercial and financial managerial roles, which we can summarize as the ‘rise of white-collar’ occupations, both among males and females.

One might ask, despite being an urban setting, how could the amount of occupational share within primary sector be such in a low level? Notwithstanding with the methodological issues regarding the 1897 census, where family members other than the household head, who were dealing with agricultural works were not included in the working population, there could be some additional explanation for this low figure of primary activities.

First and foremost, we must keep in mind that it is the cities that we take as a unit of analysis and it would be reasonable to observe that the urban population has lowered interest in agriculture. We know that while it is possible the industrialization could also be a rural process, the case of Ivanovo resembles ‘the Western case of city development’ where industrial activity led the city population to grow. Susan Vorderer, in her PHD thesis on Ivanovo, notes that despite its weakness, agricultural activity did exist in and near areas of the city during the late 19th century. However, since the city was dominated by factory production around last fifty years (from mid-19th to early 20th centuries), the agricultural population has been lowered by a great extent.¹⁶⁶ She does not specify any figures so we could not compare.

¹⁶⁶Ibid. 67.

One also must keep in mind that the region where Ivanovo lies in, Central Industrial Region and more specifically, Vladimir province, has been traditionally known as a ‘non-agricultural’ area due to unfavourable exogenous conditions.¹⁶⁷ By ‘exogenous conditions’, we mean the unfavourable weather and soil conditions; Central Industrial Region, in contrast with the Black Earth Region, has already been known as a non-friendly place for agricultural production.¹⁶⁸ This might be yet another explanation for low figures of primary sector activity in 1897.

With the low level of primary sector occupations and a partial transition towards secondary to tertiary sector, regarding the orthodox understanding of structural transformation, Ivanovo stands for an exceptional example for Russian context. We must recall Paul Gregory and his implementation of the ‘Modern Economic Growth’ framework in the Russian case: Gregory has claimed that Russia could not be classified as exhibiting ‘a modern growth’ path since its manufacturing was far from where it should have been while the agriculture was still too high.¹⁶⁹

Before I come to the end of this discussion, there is one issue to be addressed: how did Ivanovo kept its industrialization momentum, despite the halt in its ‘core’ industry? How did the population growth as well as partial occupational transformation that I have mentioned above continued?

¹⁶⁷Brower, *The Russian City*; Hamm, *The City in Russian History*; Bater, *Urban Industrialization in the Provincial Towns of Late Imperial Russia*, 1986.

¹⁶⁸Bater, *St Petersburg*.

¹⁶⁹Gregory, “Economic Growth and Structural Change in Tsarist Russia.”

Despite the fact that Ivanovo is exceptional among other cities, the remarkable service sector in 1897 and an even larger one in 1926, points to the same direction. Although the improvements in the transportation capabilities have already started in 1845 when Ivanovo-Nizhny Novgorod railways construction have been started,¹⁷⁰ especially in the last quarter of the 19th century, the railway networks were enhanced. The city was already had a favourable location in terms of transportation because of the river network and its proximity to Nizhny Novgorod fair, during the last ten years of the decade, As Tugan-Baranovoski notes, the new transportation lines would undermine the earlier importance of seasonal fairs and more permanent and stable ‘lines of commerce’ would start.¹⁷¹

It was the Ivanovo-Shuia railroad which started to convey the locomotives between to cities in 1868 and by 1883, it had 24 locomotives, and 111 passenger cars which carried 235,463 commuters. 422 freight cars which were carrying 253,200 pudy of good in 1883 and for Vorderer, this was reflecting how important the railways for the city to improve its economic activity.¹⁷² Between 1893-1898, between Ivanovo, Kineshima and Yaroslav, yet another railway line construction has been started. There was already one but a second, albeit more direct line of railway road were also built in 1896 between Moscow and Ivanovo.¹⁷³

Immigration would mean for a city, a need for food. More people coming into the city in order to find an occupation in the urban setting, the less would be the city inclined to produce its own

¹⁷⁰Vorderer, “Urbanization and Industrialization in Late Imperial Russia,” 327.

¹⁷¹Tugan-Baranovskii, *The Russian Factory in the 19th Century*, 5–6; cited by Vorderer, “Urbanization and Industrialization in Late Imperial Russia,” 330.

¹⁷² Vorderer p. 328

¹⁷³ *ibid.* p. 329

food. Instead, exporting through the goods where the dominant city industry was specialized on and importing food could be a better option. Ivanovo was no exception.¹⁷⁴ Even in 1875, more grain were imported into the city than the amount it was exported. Other important food imports were wheat, wheat flour and rye. Not only elementary and basic food requirements were imported though; by the help of newly built railways, Vladimir's fruit and vegetable crops were brought to the city by both train and river networks involved.¹⁷⁵ Once again, enhanced transportation opportunities led city population to feed themselves and hence, a non-agricultural city economy to be formed via occupational transformation.

Verdict: Occupational Transformation in Ivanovo: 1897-1926

According to our analysis, Ivanovo had a strong secondary sector a mediocre tertiary sector and a tiny primary sector in 1897 where there are more males and females within total population. These are clear indicators of a typical city industrialization which was rare in Russia. Moreover, despite the main engine of the city industry, textiles was harshly affected from the economic crisis conditions of first ten years of 20th century, the secondary sector remained resilient among females while males became more inclined to have a 'heavy industry related' secondary sector occupation or a 'white-collar' related tertiary sector occupation. For this continuity, the developments in the transportation within the region could be crucial in order to keep up the momentum regarding in-migration, urbanization and occupational transformation. We could deem all of these developments as 'industrialization' in a wider sense and conclude that enhanced transportation opportunities could be the determining factor.

¹⁷⁴Vorderer, "Urbanization and Industrialization in Late Imperial Russia," 324.

¹⁷⁵Ibid. 326.

Occupational Transformation in Ekaterinburg: 1897-1926

General Facts: Ekaterinburg

As we have done in the introductory sector for city Ivanovo, first we would like to introduce the regional context where Ekaterinburg has grown into prominence. In this case, we should start with the Urals region industrial character of the region would play a large role on the formation and the rise of Ekaterinburg as a city.

According to earlier studies, Urals, as a region had a ‘coming back and forth’ process regarding its prominence within national economy; after having peak in the 1760s, stayed backwards and obsolete in the beginning of 1800; mostly lost its share of iron market due to lack of modernization afterwards until the government initiatives for heavy-industry induced growth in 1890s.¹⁷⁶

There were three critical periods for Ural metallurgical industry during the 18th century: ‘era of pioneers’ where from 1716 to 1745, the Demidovs, the industrial dynasty who initiated the

¹⁷⁶Blackwell, *The Beginnings of Russian Industrialization, 1800-1860*, 19–24; Crisp, *Studies in the Russian Economy before 1914*, 60–66; Roger Portal, *L'Oural au XVIIIe siècle; étude d'histoire économique et sociale.*, Collection historique de l'Institut d'études slaves, 14 (Paris, Institut d'études slaves, 1950); D. V. Gavrilov, *Gornozavodskii Ural, XVII -- XX vv.: izbrannye trudy* (Ekaterinburg: Rossiiskaia akademiia nauk, Ural'skoe otd-nie, In-t istorii i arkhologii, 2005); D. V. Gavrilov and Institut istorii i arkhologii, *Istoriia Urala v period kapitalizma* (Moskva: Nauka, 1990); Gatrell, *The Tsarist Economy, 1850-1917*, 144–146; Elena Givental, “Metals, Weapons, Wars, and Revolutions: Three Hundred Years of the Economic Evolution of the Urals Industrial Region in Russia” (Unpublished Ph.D. Thesis, University of California, Davis, 2009).

factory complex process upon the orders of Peter the Great. By 1725, Russia led the world in production of iron, with the share of the Urals in Russia being 73%.¹⁷⁷

The first imitative came from the Tsar Peter the Great; he has called Nikita Demidov for duty, which was proceeding with his successful armament industry in Tula, to open up Urals into industrial production. As Roger Portal, who studied Ural metallurgical industry in its historical development in 1950s underlines, this was a necessity more than a preference.¹⁷⁸ 20 years later the initial forward movement, the industry has widened its confines and expanded into the southern Urals quickly. From 1762 to 1807 however, blurred with peasantry revolution of Pugachev and it would take almost a century for the industry to recover for some extent.¹⁷⁹

By 1750, by the intentional investments into the region, Urals have become one of the most prominent metal and armaments production centre. Before the advent of steam power technology, Urals were one of the world's first industrial regions. Being a state initiative, it was one of the first and foremost exemplary initiatives for an industry to commence. As Blackwell puts it: "Ural factory complex was Peter's most significant and permanent industrial achievement".¹⁸⁰ Urals were growing upon the demand on iron, basically coming from England. By 1750, most of iron products were exported abroad.¹⁸¹

¹⁷⁷ Gavrilov, *Gornozavodskii Ural, XVII -- XX vv.*, 27.

¹⁷⁸ Crisp, *Studies in the Russian Economy before 1914*, 60–61.

¹⁷⁹ Ibid.

¹⁸⁰ Blackwell, *The Beginnings of Russian Industrialization, 1800-1860*, 19.

¹⁸¹ Ibid. 21.

The labour who was working in these factories that made up the metallurgical industry were largely 'unfree'. The Tsarist state collaborated with the nobility and gave those rights to access cheap labour more easily. The village serfs became industrial serfs after 1721, when the industrialists were permitted to buy villages of serfs. There were even cases where the entire village changed location because of a newly constructed factor. According to the official factory censuses of the assigned male serfs in the Urals grew steadily, 25 thousand persons in 1718-1727, 56 thousand persons in 1741-1743, and 121.7 thousand persons in 1762.¹⁸²

At the end of 18th century, nevertheless, Russia was having a third of World's iron total share and had the larger exports than any other country.¹⁸³ By 1860, three fourths of Russia's iron factories and almost all of the largest ones were located in Perm and Orenburg, most prominently Nizhny-Tagil Complex, owned by the famous Demidovs

However, iron industry of Urals will falter throughout the 19th century and other countries will rise to prominence. While English iron industry was rising high in the same period, Urals were stagnant by mid-19th century, Russian fell to 8th place in the World iron production.¹⁸⁴ Urals fell behind England, Australia, and Chile which were advantageous in copper and iron markets by production costs. The number of copper smelters was 27 in 1860 to 9 in 1879 and 5 in 1900,

¹⁸² Givental, Elena. *Metals, Weapons, Wars, and Revolutions: Three Hundred Years of the Economic Evolution of the Urals Industrial Region in Russia*. University of California, Davis, 2009. p. 150 citing from Gavrilov, D. V. *Gornozavodskii Ural, XVII -- XX vv.: izbrannye Trudy*. Ekaterinburg: Rossiiskaia akademiia nauk, Ural'skoe otd-nie, In-t istorii i arkheologii, 2005.

¹⁸³ Blackwell, William L. *The Beginnings of Russian Industrialization, 1800-1860*. Princeton, N.J: Princeton University Press, 1968.p. 56

¹⁸⁴ Strumilin, S. G. *Istoriia chernoï metallurgii v SSSR*. Moskva: Nauka, 1967. cited by Blackwell 1968.

and the production of copper dropped from 4.5 thousand tons in 1860 to 1.3 thousand tons in 1879¹⁸⁵

For S.S. Khromov, the developments of the metallurgy industry was stalled after the emancipation of serfdom since it was hard to find labour for the factories since the peasantry was more easily mobilized.¹⁸⁶

Elena Givental cites from Malcolm Falkus' premise that one essential feature of the Russian economy in the 17th - 18th centuries was heavy involvement by the state.¹⁸⁷ While the serfdom was providing cheap labour needed, industrial development under Peter I was made in forced nature and despite all, shortage of labour was remained as a major problem for industrialization. He argued that this serf labor where unskilled cheap labor force was "assigned" to the factories as well as the heavy involvement of state into the industry, hindered further growth of the industry and this was the reason why the region could not respond to changes within the structure and the quantity of both domestic and global demand. Blackwell agrees with the servile labor antithetical to sustainable industrial growth but also, he undermined the unfavorable transportation possibilities as another prominent factor they played a role in the situation.¹⁸⁸

¹⁸⁵ *ibid* p. 162 citing from Gavrilov, D. V. *Gornozavodskii Ural, XVII -- XX vv.: izbrannye Trudy*. Ekaterinburg: Rossiiskaia akademiia nauk, Ural'skoe otd-nie, In-t istorii i arkheologii, 2005.

¹⁸⁶ Khromov, *Industrializatsiia Sovetskogo Soiuz*, 27.

¹⁸⁷ Givental, "Metals, Weapons, Wars, and Revolutions," 149.

¹⁸⁸ Blackwell, *The Beginnings of Russian Industrialization, 1800-1860*, 57.

Olga Crisp does not fully accept the view that it was the serf labor structure which held Ural metallurgical industry back; if this was the case, than another industry which was based on serf labor, the sugar industry would also had to be held back, which was not the case. For her, the reasons were various: associated with the industrial revolution in Britain, the changes in the smelting technique and the inability of Urals technology to catch up with these, once its main impulse for export, British market, was lost. The vast resources, for instance, the woods or close by ores for energy production were mostly depleted when it comes to 19th century, plus the transportation difficulties also led Urals industry to falter. ¹⁸⁹

Peter Gatrell argues that the backwardness of Ural industry was not directly associated with factor costs, meaning, cheap serf labour could not be a reason by itself. For him, before the construction of railroads, there was a narrow domestic market and after the construction has started, the fragmented and dispersed structure of ironworks led this forestall. These were the main reason for Urals to stay behind in the competition with other regions. ¹⁹⁰

Thanks to state for the heavy-scale industry to develop in towards the end of century and rising demand for copper as well as iron, immediately needed by electrical engineering and machine building industries, Urals region partially increased its contribution to Russian economy. The limitation was stemming from the following: There have been new copper producing regions and sites were growing and they were much more competitive against Urals. For instance Altai,

¹⁸⁹Crisp, *Studies in the Russian Economy before 1914*, 64–66.

¹⁹⁰Gatrell, *The Tsarist Economy, 1850-1917*, 144–145.

Caucasus and Kazakhstan reduced the share of the Urals in Russia's total copper production from 89.3% in 1860 to 47.8% in 1900. ¹⁹¹

While Urals were by some extent recuperating, it has lost the competitive edge: the share of the South in Russia in metallurgical production increased from 1.5% in 1870 to 52% in 1900 and to 72% in 1913. Regarding the iron and steel output between 1908 and 1913 was relatively better for Russia in general; however, the leading region regarding these industries was not Urals but Southern Russia. ¹⁹²

Thus, the Urals lost the primary role in Russia's metal production which it had for almost two hundred years. By the end of the 19th century Russia had six industrialized regions, which produced over 82% of Russia's total industrial output. The South region (Ukraine) was the second after the Central Province with 18.3% of the total, while the Urals was the sixth with only 5.1%)¹⁹³

In the last three decades before WWI, Russia experienced two periods of fast economic growth; the first period in the 1890s with 8% annual growth and the second period in 1907-1913 with

¹⁹¹ Gavrilov, *Gornozavodskii Ural, XVII -- XX vv.*; cited by Givental, "Metals, Weapons, Wars, and Revolutions," 162.

¹⁹²R. W. Davies, Mark Harrison, and S. G. Wheatcroft, eds., *The Economic Transformation of the Soviet Union, 1913-1945* (Cambridge ; New York: Cambridge University Press, 1994), 133.

¹⁹³W. H. Parker, *An Historical Geography of Russia* (London, University of London P, 1968), 69; cited by Givental, "Metals, Weapons, Wars, and Revolutions," 166.

6.25%.The economic upsurge in Russia in the 1890s stimulated capital investments in the renovation of obsolete Urals metallurgy. ¹⁹⁴

The nearing war through 1910s, provided a new wave of positive impulse for Urals metallurgy industry. Thus from 1910 to 1914, thanks to the rises in metal prices and a growing quest for railroad construction, Urals metallurgy industry recuperated in a limited scope and this surge continued until the war broke in 1914. *"The World War gave a new modernization boost to the Urals industry. The Urals defence potential was highly esteemed by the Russian military command..."* ¹⁹⁵

Based on all these facts, the foundation of the city Ekaterinburg had similarities and differences with Ivanovo. First of all, there is a purely economic reason why the city has been built and rose into prominence: a region-related industry. Textiles was the reason why Ivanovo has taken the nickname as 'Russian Manchester' and metallurgy made Ekaterinburg. However, Ekaterinburg was found much earlier than its Ivanovo and unlike Ivanovo, it was a deliberate state project. Whereas the latter became a centre of attraction for textile manufacturing and hence, ignited a huge influx of population especially after 1812 Moscow fire, Ekaterinburg was found by a Royal industrial initiative in 1723, by the royal decree of Peter the Great. ¹⁹⁶ While Ivanovo was found spontaneously within the historical progress of economic development and

¹⁹⁴Malcolm E. Falkus, *The Industrialisation of Russia, 1700-1914*, Studies in Economic History (London: Macmillan, 1972); cited by Givental, "Metals, Weapons, Wars, and Revolutions," 166.

¹⁹⁵Gavrilov, *Gornozavodskii Ural, XVII -- XX vv.*; cited by Givental, "Metals, Weapons, Wars, and Revolutions," 167–68.

¹⁹⁶ Givental, Elena. *Metals, Weapons, Wars, and Revolutions: Three Hundred Years of the Economic Evolution of the Urals Industrial Region in Russia*. University of California, Davis, 2009. p. 126

industrialization, the city of Ekaterinburg was one of the main pillars of the national industrialization project itself.

Among the Urals factor complex, Ekaterinburg inventory had a special place with canals and dams, two blast furnaces as well as three large forges, a foundry, canon-making plants as well as numerous warehouses and private homes. In this inventory, there were 180 people working and large government administrative staffs were also present. Verh-Iset (1726), Verh-Neuktuski (1726-1882) and Nizhneistetskii (1786-1915) all these factories and big-scale production made Ekaterinburg become an administrative centre in the provinces in the periphery of Russian Empire. ¹⁹⁷

The improvement of the city which was recorded throughout 18th century, thanks to the Great Siberian Transit Road would turn the city ‘a window between Europe and Asia’ and city has been turned into a commercial and transportation hub. ¹⁹⁸

Ekaterinburg Mint, which was founded in 1735, also helped the city to prosper. By mid-18th century, along with Petersburg and Moscow, Ekaterinburg has rose prominence in coin production. For almost 150 years, %80 of copper coin for the whole country were minted in Ekaterinburg. ¹⁹⁹

¹⁹⁷Portal, *L'Oural au XVIIIe siècle; étude d'histoire économique et sociale.*, 153–54,169–71; cited by Blackwell, *The Beginnings of Russian Industrialization, 1800-1860*, 20.

¹⁹⁸E. S. Tulisov, ed., *Ekaterinburg: Lista Straniitsy Stoletii = Ekaterinburg: Turning over the Centuries' Pages* (Ekaterinburg: Sokrat, 2003), 37.

¹⁹⁹Ibid. 35.

After 1806, the mining condition project, Ekaterinburg became the ‘mining city’ (gornovo goroda), the only which was carrying on that title. This was important because by this way, in administrative matters, the city had relatively more freedom from the local civic administrative jurisdiction.²⁰⁰ During the years between 1830 and 1860 has been called as ‘Golden Age’ of Ekaterinburg where a lot of gold mining related companied were established.²⁰¹

Ural region, as a whole, has witnessed a strong population growth and urbanization during 19th century. The population rise and urbanization makes sense since after the emancipation, the recently mobilized peasantry went to look for more Southern Urals, North Kazakhstan, Siberia in order to search for new agricultural lands. When we come to 1897, the population density around Urals to the Altai Mountains has been aggravated, in fact, Central and Southern Urals avenged between 5-10 persons per square kilometre.²⁰² According to Givental the system of assigned state peasants slowed the growth of industrial cities and explained the predominance of factories and works in the Urals countryside instead.²⁰³ After the abolishment of serfdom, relevant mobilization led to high urbanization and migration to regional centres.

Total population in Ural region was 4,732,868 in 1851, 9105507 (5.6) in 1897, 11,847536 in 1926 (9.6) urban. Therefore we see that Ural region overall, started from a pretty low level of urbanization when compared to other regions as well as all Russia (9.8 in 1897 and 13.1 in

²⁰⁰Ibid. 74.

²⁰¹Nikolaï Korepanov and Vladimir Blinov, *Gorod Posredine Rossii: Ekaterinburg, Sverdlovsk, Ekaterinburg, Istoriiā v Likakh Gorodov* (Ekaterinburg: Sokrat, 2007), 63; N. A. Minenko, D. N. (Dmitrii Narkisovich)--Gorod Ekaterinburg-- Mamin-Sibiriak, and Vladimir--Bog i tsar' zavodskogo Urala-- Shkerin, *Gorod Ekaterinburg, Ocherki istorii Urala* ; vyp. 1 (Ekaterinburg: Bank kul'turnoi informatsii, 1996), 42.

²⁰²Givental, “Metals, Weapons, Wars, and Revolutions,” 126.

²⁰³Ibid. 150.

1926) however, we observe a high rate of growth both in terms of total as well as urban population.²⁰⁴

The city population of Ekaterinburg was continuously growing throughout 19th century. In 1860, the city population was 19,832(9,839 men, 9993 female) while 1171 of them were among peasantry and 1447 (668 of them were female) of them were among regular army members.²⁰⁵ During 19th century, the population increase outpaced Perm, the provincial centre. While 1860 it has become around 20,000 and at the turn of century, almost 60,000.²⁰⁶

The city has been taken in Ekaterinburgski Gubernii in 1918 but in 1923, Uralskii Gubernii in 1924, the name of the city has been changed as Sverdlosk.

²⁰⁴Robert A. Lewis and J. William Leasure, "Regional Population Changes in Russia and the USSR Since 1851," *Slavic Review* 25, no. 4 (1966): 663–68.

²⁰⁵D.N. Mamin-Sibiriak, N. A. Minenko, and V.A. Shkerin, "Gorod Ekaterinburg (1889)," in *Gorod Ekaterinburg* (Ekaterinburg: Bank kul'turnoĭ informatsii, 1996), 54.

²⁰⁶Korepanov and Blinov, *Gorod Posredine Rossii*, 75.

Results and Analysis: Ekaterinburg 1897-1926

Our next task would be, based on this prior historical insight, track the population progress and the transformation of the occupational structure in the city of Ekaterinburg between 1897 and 1926. As it has been done in the Ivanovo case, the task would be fulfilled from three different aspects; the population progress, the sectoral occupational transformation and the Sub-sectoral occupational transformation. Sub-sectoral occupation transformation has two branches; secondary Sub-sectoral occupational allocation and tertiary Sub-sectoral occupational allocation. Each sub-section includes tables and charts on both total population as well as working population level. ²⁰⁷At the end of each sub-section, there are the summary of charts where the relevant picture has been briefly reviewed and at the end of subsection ‘Occupational Transformation in Ekaterinburg: 1897-1926’, there is a discussion section where figures and trends were further elaborated, as well as in the verdict part, conclusory remarks has been made.

²⁰⁷ Among the titles within the tables and charts, the ones which were written in capital letters, stand as a PSTI first digit occupational sector and these are composed of Sub-sectoral occupational titles which were written in lowercase. The only exception is the ‘working population’, ‘non-working population’, ‘sectorally unspecific’ and ‘without occupation or unstated’ which were written always in capital letters in order to make them easy to track. Regarding 1926 Census data, there are two sub-titles under ‘without occupation or unstated’: ‘unemployment’ and ‘unstated’. However, since 1897 census data was not available for PSTI for such coding regarding ‘without occupation or unstated’ most of the comparison would be made on the ‘without occupation or unstated’ level and not with ‘unemployment’ and ‘unstated’ breakdown. Regarding the charts and tables, ‘%’ signifies for percentage and ‘#’ signifies for real numbers.

Population Change in Ekaterinburg: 1897-1926

Table 15- Ekaterinburg 1897 Population Gender Allocation

EKATERINBURG 1897 numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %	EKATERINBURG 1897	MALE %	FEMALE %
WORKING POPULATION	12930	8677	21607	64%	38%	50%	WORKING POPULATION	60%	40%
NON-WORKING POPULATION	7263	14419	21682	36%	62%	50%	NON-WORKING POPULATION	33%	67%
TOTAL POPULATION	20193	23096	43289	100%	100%	100%	TOTAL POPULATION	47%	53%

Chart 54- Ekaterinburg 1897 Population Gender Allocation

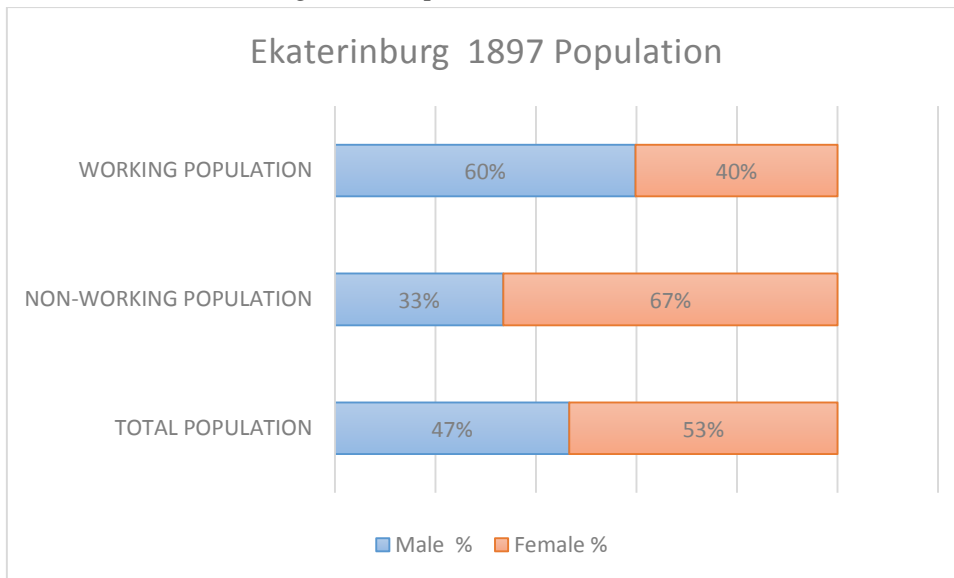
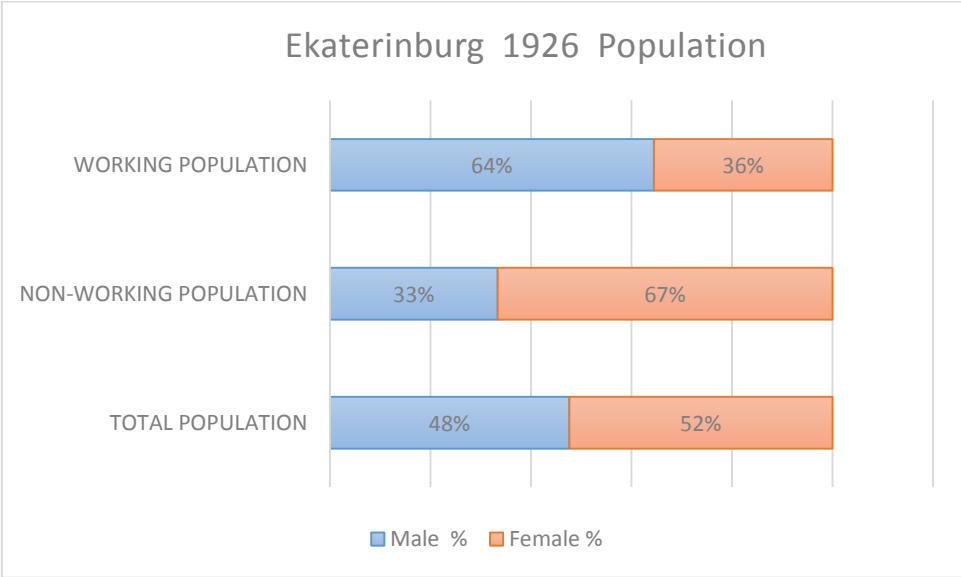


Table 16-- Ekaterinburg 1926 Population Gender Allocation

1926 EKATERINBURG (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %	1926 EKATERINBURG	MALE %	FEMALE %
WORKING POPULATION	40240	22184	62424	62%	31%	46%	WORKING POPULATION	64%	36%
NON-WORKING POPULATION	24622	49105	73727	38%	69%	54%	NON-WORKING POPULATION	33%	67%
TOTAL POPULATION	64862	71289	136151	100%	100%	100%	TOTAL POPULATION	48%	52%

Chart 55- Ekaterinburg 1926 Population Gender Allocation



General Outlook: Ekaterinburg Population Change between 1897-1926

Table 17- Ekaterinburg 1897-1926 Population Growth Rates

1897 EKATERINBURG(# numbers,% shares)	MALE #	FEMALE #	BOTH #	1926 EKATERINBURG	MALE #	FEMALE #	BOTH #	1897-1926 EKATERINBURG CHANGE (1897=100)	MALE %	FEMALE %	BOTH %
WORKING POPULATION	12930	8677	21607	WORKING POPULATION	40240	22184	62424	WORKING POPULATION	211%	156%	189%
NON-WORKING POPULATION	7263	14419	21682	NON-WORKING POPULATION	24622	49105	73727	NON-WORKING POPULATION	239%	241%	240%
TOTAL POPULATION	20193	23096	43289	TOTAL POPULATION	64862	71289	136151	TOTAL POPULATION	221%	209%	215%
LABOR PARTICIPATION	64%	38%	50%	LABOR PARTICIPATION	62%	31%	46%	LABOR PARTICIPATION	-2%	-6%	-4%

Chart 56- Ekaterinburg 1897-1926 Male Population-Labor Participation Rates

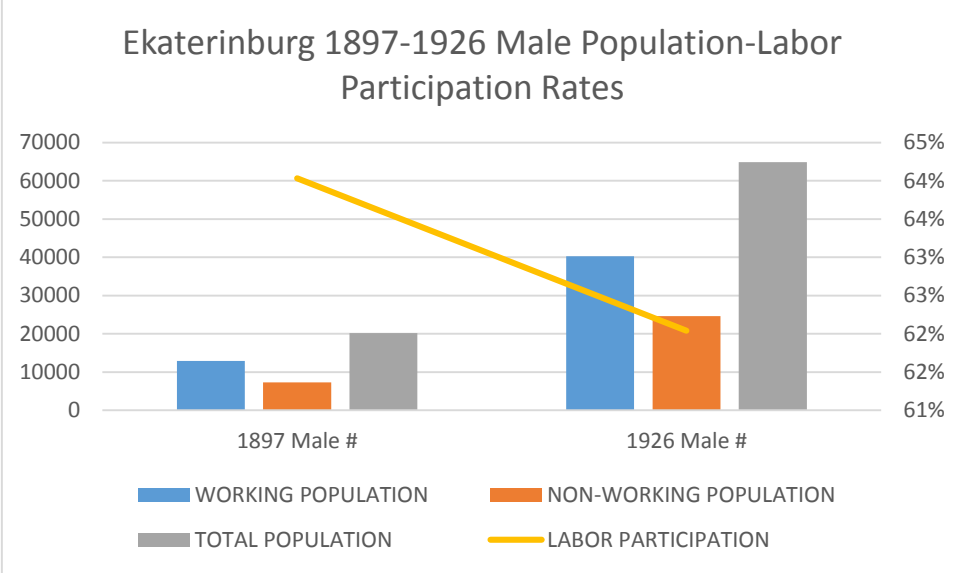


Chart 57- Ekaterinburg 1897-1926 Female Population-Labor Participation Rates

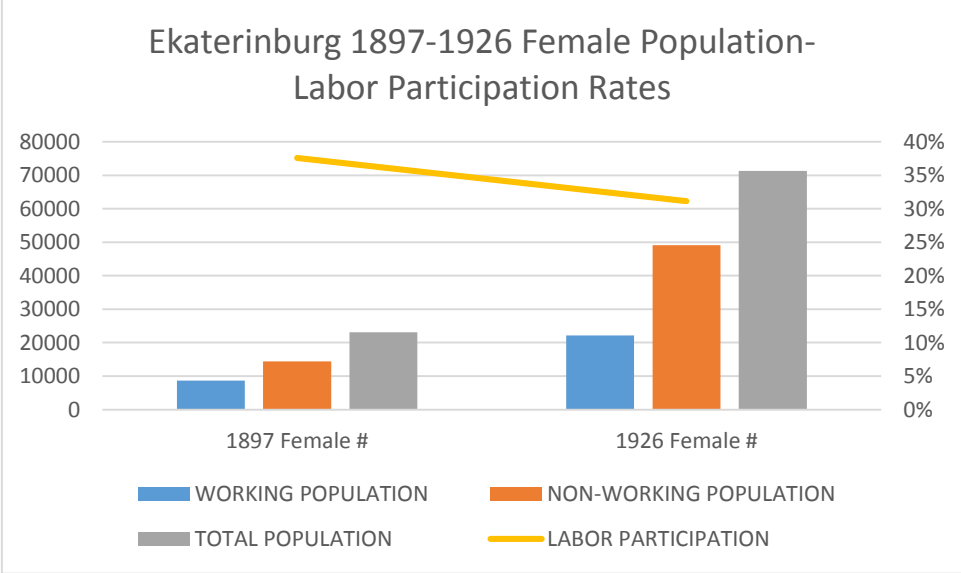
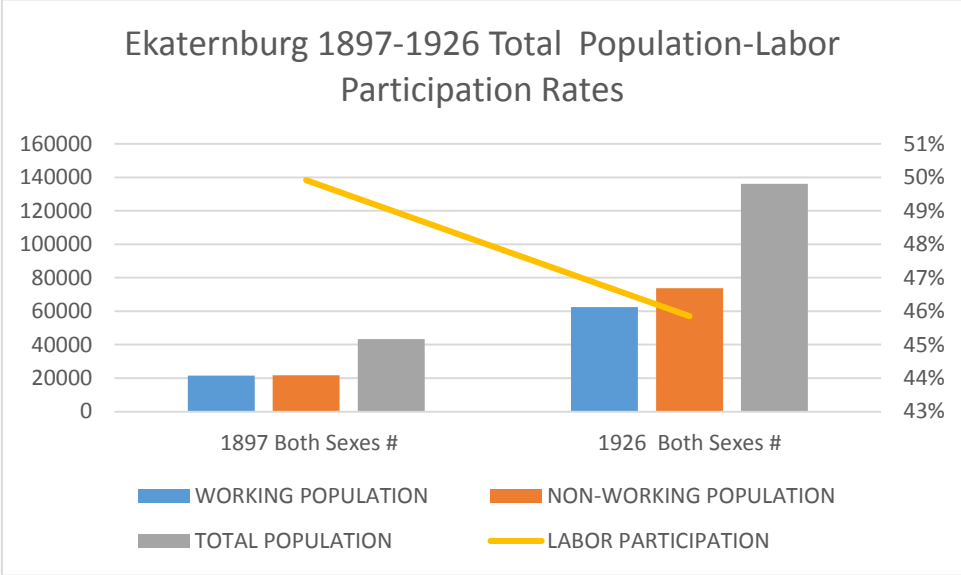


Chart 58- Ekaterinburg 1897-1926 Total Population-Labour Participation Rates



Summary of Charts: Ekaterinburg Population Change between 1897-1926

According to Census 1897 registers, Ekaterinburg, has a total population of 43289 while %53 of them were female. The working population rate appears to be %50 while the same figure is 64% for males and 38% for females. Despite being inferior in terms of share in total population, males make up majority of workforce with 60%.

When we come to 1926, total population reaches 136151 while male-female balance seems to unchanged around 48%-52% level and labour participation for both sexes combined rate appears to be slightly diminishing (from %50 to %46). Male labour participation stays as high as %62 while same figures for females, remains very low at %31. In 1926, %64 of workforce in Ekaterinburg was made up by males which mean a further aggravation in males' rates regarding the working population; despite the gender balances stay the same in total population.

As we can observe from population growth rates, between 1897-1926 in the city of Ekaterinburg ,the city population growth is %215 (1897=100) while both male and female population growth rates are more or less equal to this growth rate. Meanwhile, non-working population increases by a great extent (%240). While working population of Ekaterinburg also grows by 189%, males are well above this rate %211 and female's %153. In sum, Ekaterinburg, between 1897 and 1926 was becoming a much more crowded city, tripled its total population while the majority of these 'newcomers' to the population, does not take part in the labor workforce. The city is becoming a more male dominated regarding working population while males-females balances were kept in the same level of 1897.

Sectoral Occupational Transformation in Ekaterinburg: 1897-1926

Table 18- Ekaterinburg 1897 Total Population, Sectoral Occupational Allocation

1897 EKATERINBURG (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	610	46	656	3%	0%	2%
SECONDARY	4389	1475	5864	22%	6%	14%
TERTIARY DEALERS	1263	298	1561	6%	1%	4%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	3359	5175	8534	17%	22%	20%
TRANSPORT AND COMMUNICATIONS	1257	24	1281	6%	0%	3%
SECTORALLY UNSPECIFIED OCCUPATIONS	1002	250	1252	5%	1%	3%
WITHOUT OCCUPATION OR UNSTATED	1050	1409	2459	5%	6%	6%
WORKING POPULATION	12930	8677	21607	64%	38%	50%
NON-WORKING POPULATION	7263	14419	21682	36%	62%	50%
TOTAL POPULATION	20193	23096	43289	100%	100%	100%

Chart 59-Ekaterinburg 1897 Total Population, Sectoral Occupational Allocation

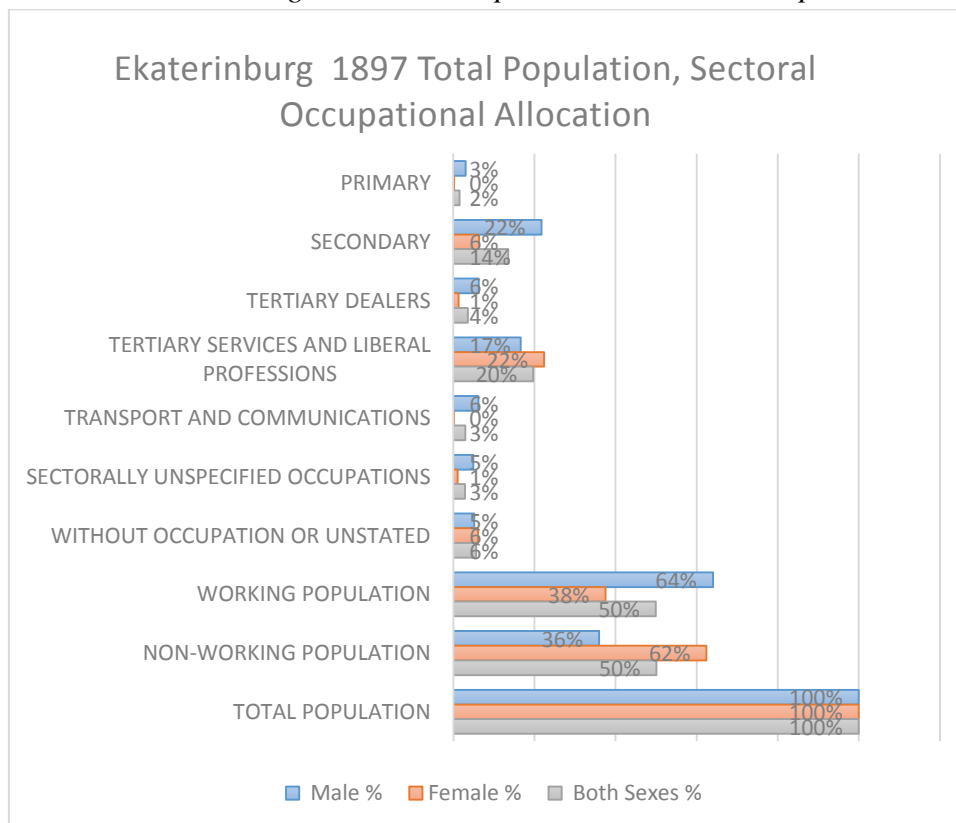


Table 19- Ekaterinburg 1897 Working Population, Sectoral Occupational Allocation

1897 EKATERINBURG (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	610	46	656	5%	1%	3%
SECONDARY	4389	1475	5864	34%	17%	27%
TERTIARY DEALERS	1263	298	1561	10%	3%	7%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	3359	5175	8534	26%	60%	39%
TRANSPORT AND COMMUNICATIONS	1257	24	1281	10%	0%	6%
SECTORALLY UNSPECIFIED OCCUPATIONS	1002	250	1252	8%	3%	6%
WITHOUT OCCUPATION OR UNSTATED	1050	1409	2459	8%	16%	11%
WORKING POPULATION	12930	8677	21607	100%	100%	100%

Chart 60- Ekaterinburg 1897 Working Population, Sectoral Occupational Allocation

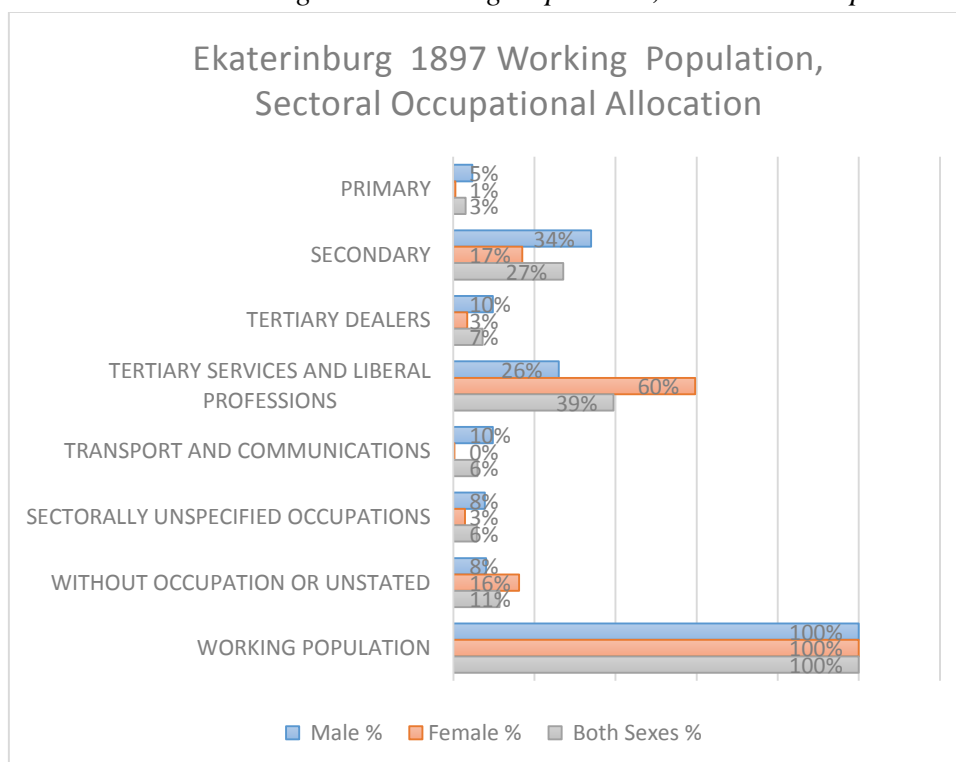
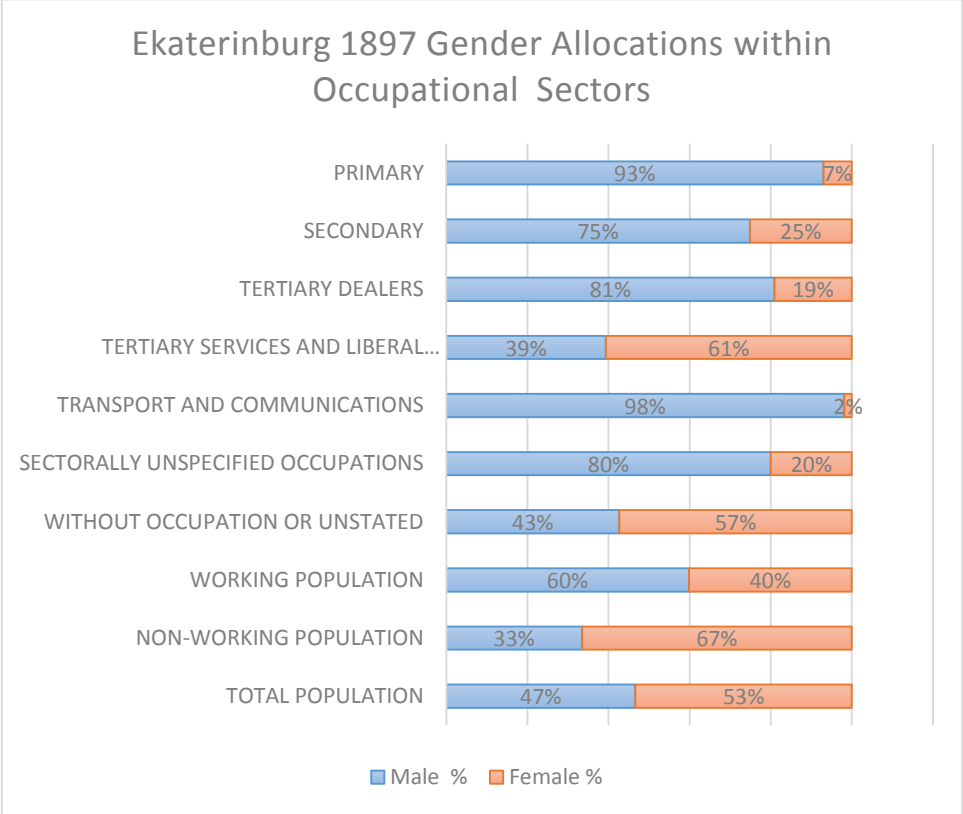


Chart 61- Ekaterinburg 1897 Gender Allocation within Occupational Sectors



Summary of Charts: Ekaterinburg 1897, Sectoral Occupational Allocation

As we can obtain from our analysis while using population data in 1897 Census records, Ekaterinburg, at the end of 19th century, had a tertiary service based occupational structure.

Among all tertiary sector branches, tertiary sector services and liberal professions comes up prominence with 20% share of total population. The important fact here is the low labour participation rates; where for females, only %38 part of the population appears to be capable of having an occupation.

Among working population, tertiary services and liberal profession has an immense concentration rates as an occupational sector for both sexes; especially for females (%60).

Regarding males, transportation and tertiary dealers, together make 20% of working male population, which is also worth noticing. Meanwhile, among males, secondary sector has more prominence than all other PSTI sectors (%34). Nearly unemployment rate 'without occupation or unstated' among males (%8) and females (%16) would also shows us that Ekaterinburg economic activity, within the city, has an employment problem in itself.

Regarding females, the working population rate is around %38 and %22 of females have occupations under 'tertiary service and liberal professions.' Other than this specific sector, there is hard any PSTI sector as an occupational centre catches attention.

The gender breakdown of specific PSTI sectors shows us that most of these sectors are dominated by males. Females have the majority within non-working population, 'without occupation'. Only in 'Tertiary Services and Liberal Professions', females have the majority in gender allocations.

Table 20- Ekaterinburg 1926 Total Population, Sectoral Occupational Allocation

1926 EKATERINBURG (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	765	438	1203	1%	1%	1%
SECONDARY	8742	2592	11334	13%	4%	8%
TERTIARY SELLERS	1566	625	2191	2%	1%	2%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	14886	11969	26855	23%	17%	20%
TRANSPORT AND COMMUNICATIONS	4097	293	4390	6%	0%	3%
SECTORALLY UNSPECIFIED OCCUPATIONS	2751	897	3648	4%	1%	3%
WITHOUT OCCUPATION OR UNSTATED	7433	5370	12803	11%	8%	9%
WORKING POPULATION	40240	22184	62424	62%	31%	46%
NON-WORKING POPULATION	24622	49105	73727	38%	69%	54%
TOTAL POPULATION	64862	71289	136151	100%	100%	100%

Chart 62- Ekaterinburg 1926 Total Population, Sectoral Occupational Allocation

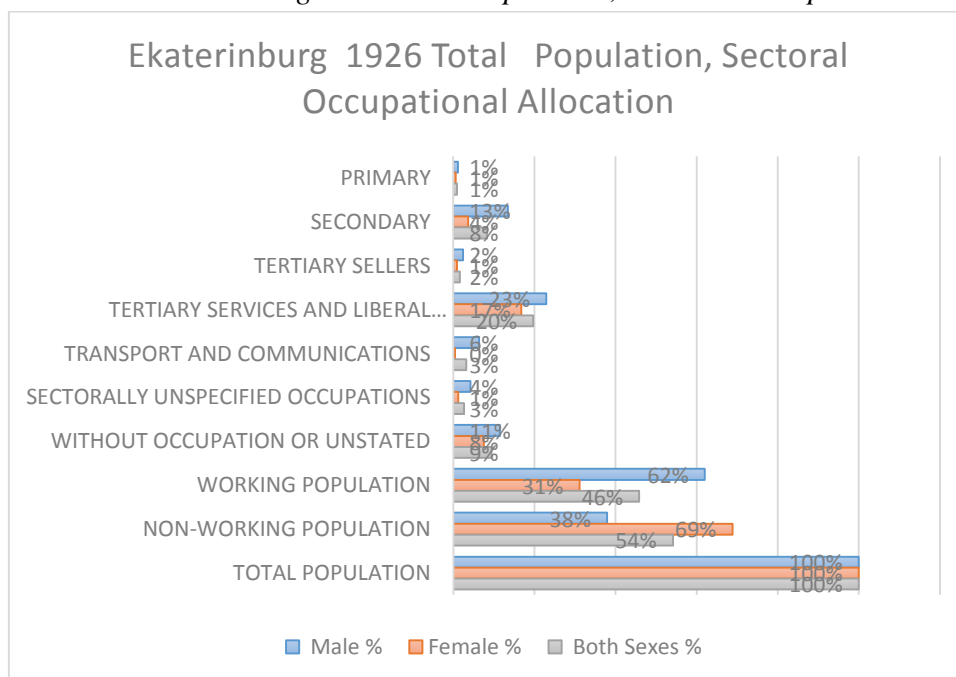


Table 21- Ekaterinburg 1926 Working Population, Sectoral Occupational Allocation

1926 EKATERINBURG (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	765	438	1203	2%	2%	2%
SECONDARY	8742	2592	11334	22%	12%	18%
TERTIARY SELLERS	1566	625	2191	4%	3%	4%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	14886	11969	26855	37%	54%	43%
TRANSPORT AND COMMUNICATIONS	4097	293	4390	10%	1%	7%
SECTORALLY UNSPECIFIED OCCUPATIONS	2751	897	3648	7%	4%	6%
WITHOUT OCCUPATION OR UNSTATED	7433	5370	12803	18%	24%	21%
WORKING POPULATION	40240	22184	62424	100%	100%	100%

Chart 63- Ekaterinburg 1926 Working Population, Sectoral Occupational Allocation

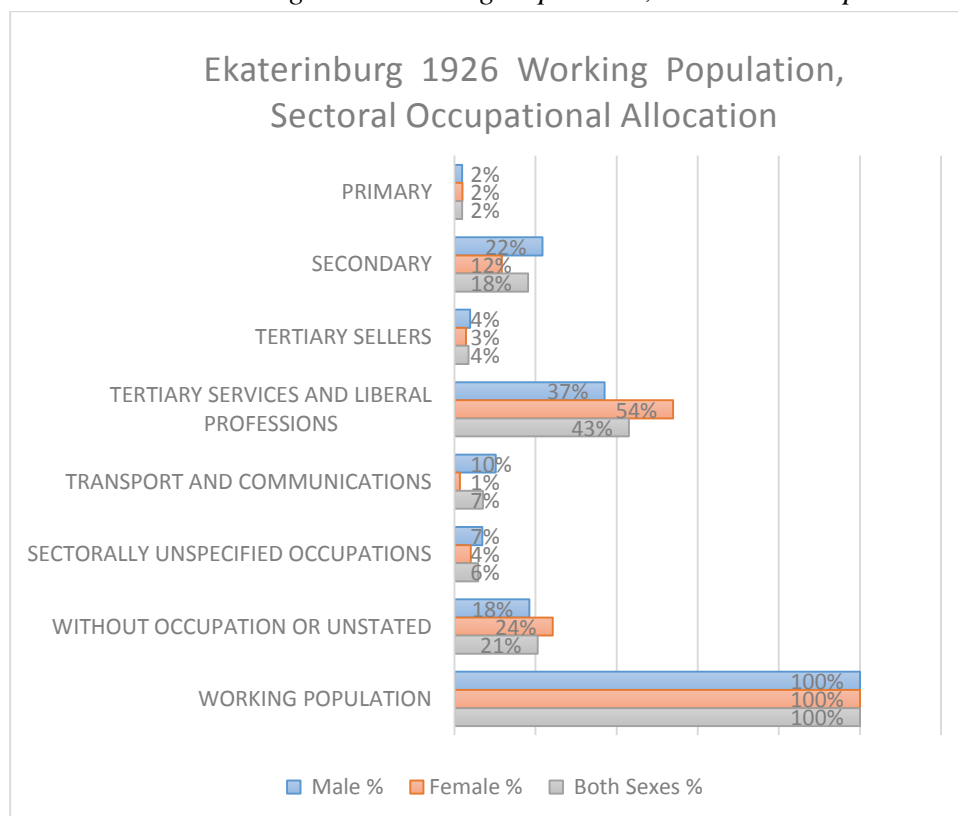
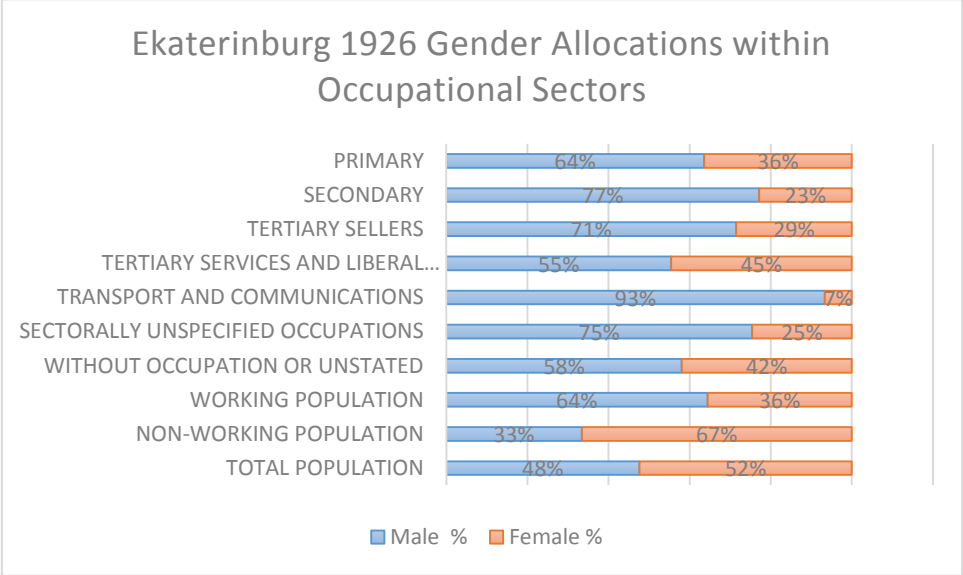


Chart 64- Ekaterinburg 1926 Gender Allocation within Occupational Sectors



Summary of Charts: Ekaterinburg 1926, Sectoral Occupational Allocation

In 1926, we could see an even more dominant tertiary services and liberal professions sector. In total population, almost %26 were registered under this specific PSTI sector. Apart from that, we see only %46 of population has been registered as working population while %10 of them were registered as without having an occupation or unstated.

For males, while %61 of total population were registered as being eligible to have an occupation, more than %30 of total population had an occupation under tertiary sector branch. While tertiary services and liberal professions is leading the way among all other sectors, transportation and communication also shows some prominence. Secondary sector, is only %12 among the total and %22 among the working population.

Regarding females, within a narrow working population (in relation with total female population), a high concentration in the tertiary sector activities is easy to depict. More than %54 of female working population has been registered under ‘Tertiary Services and Liberal Professions’ One also needs to consider that only %31 of females were included in ‘working population’ and the occupational distribution may not be extensively revealing

Gender breakdown of individual sectoral distributions tells us that in 1926, almost every PSTI sector was dominated by males and this is also valid for tertiary services and liberal professions. However, male/female ratio is relatively more evenly distributed within tertiary services and liberal professions.

General Outlook: Ekaterinburg Sectoral Occupational Shift between 1897-1926

Chart 65-Ekaterinburg 1897-1926 Total Population, Both Sexes, Sectoral Occupational Shift

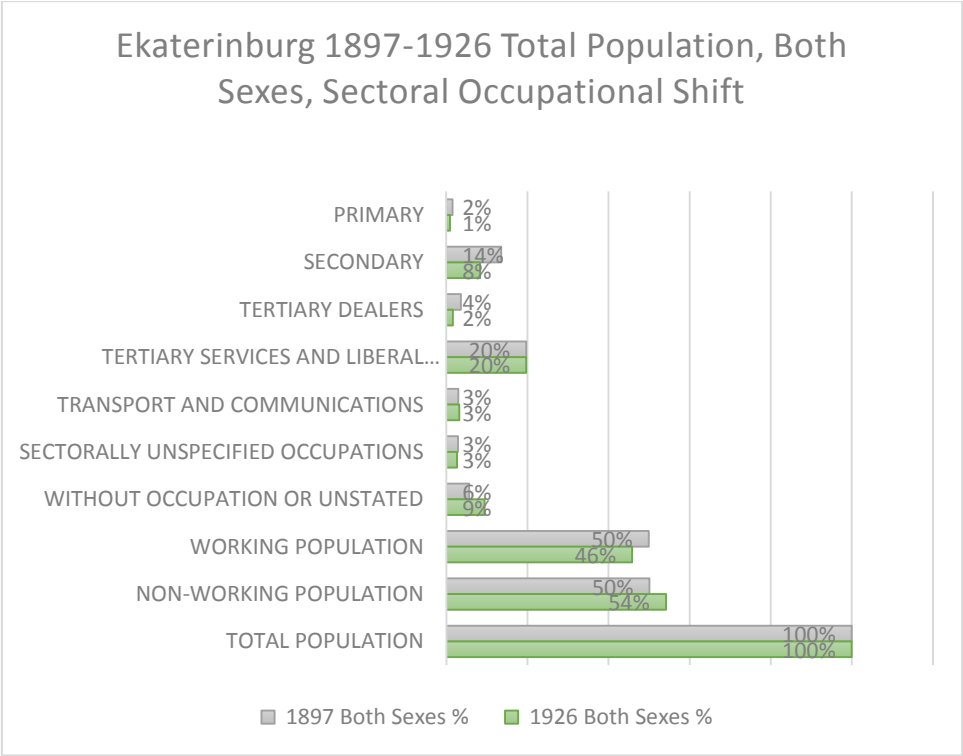


Chart 66- Ekaterinburg 1897-1926 Working Population, Both Sexes, Sectoral Occupational Shift

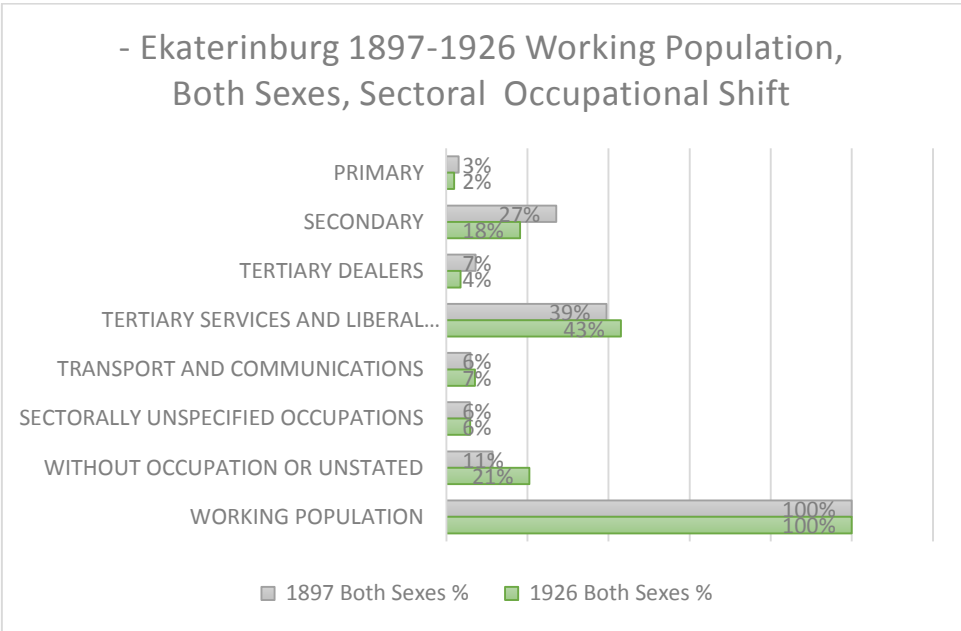


Chart 67-- Ekaterinburg 1897-1926 Total Population, Males, Sectoral Occupational Shift

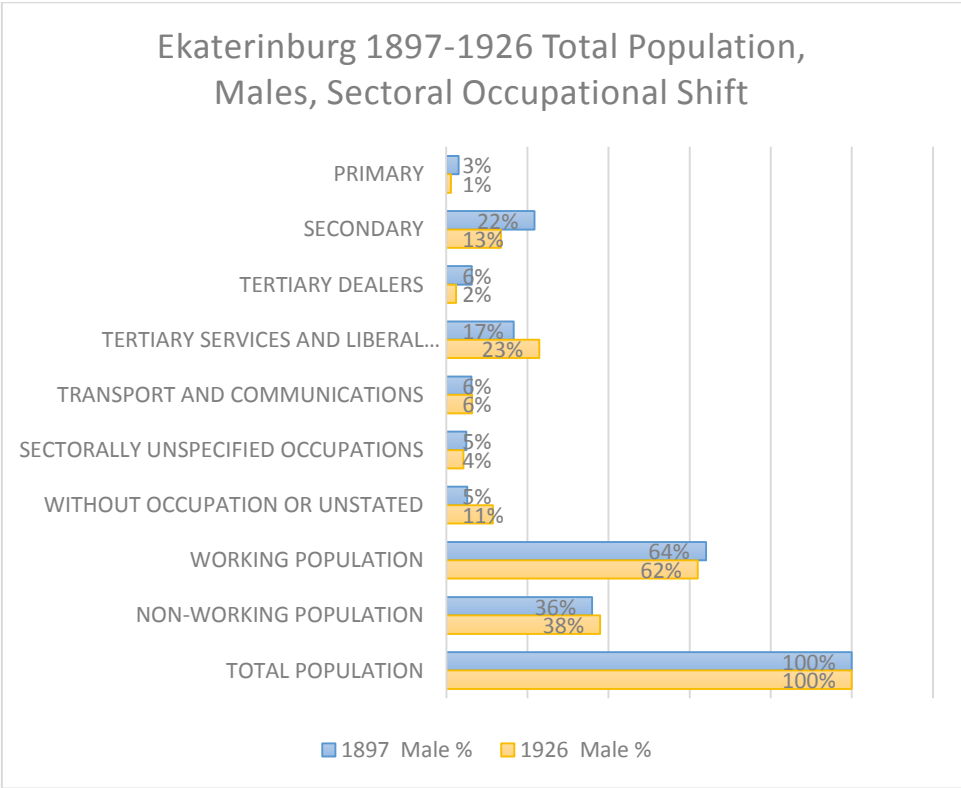


Chart 68- Ekaterinburg 1897-1926 Working Population, Males, Sectoral Occupational Shift

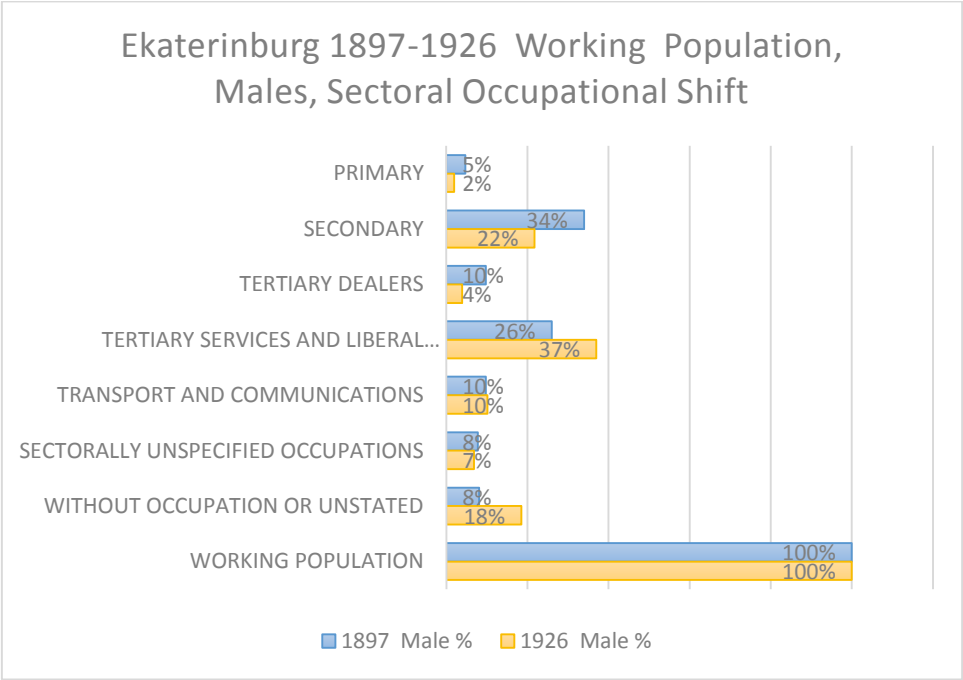


Chart 69- Ekaterinburg 1897-1926 Total Population, Females, Sectoral Occupational Shift

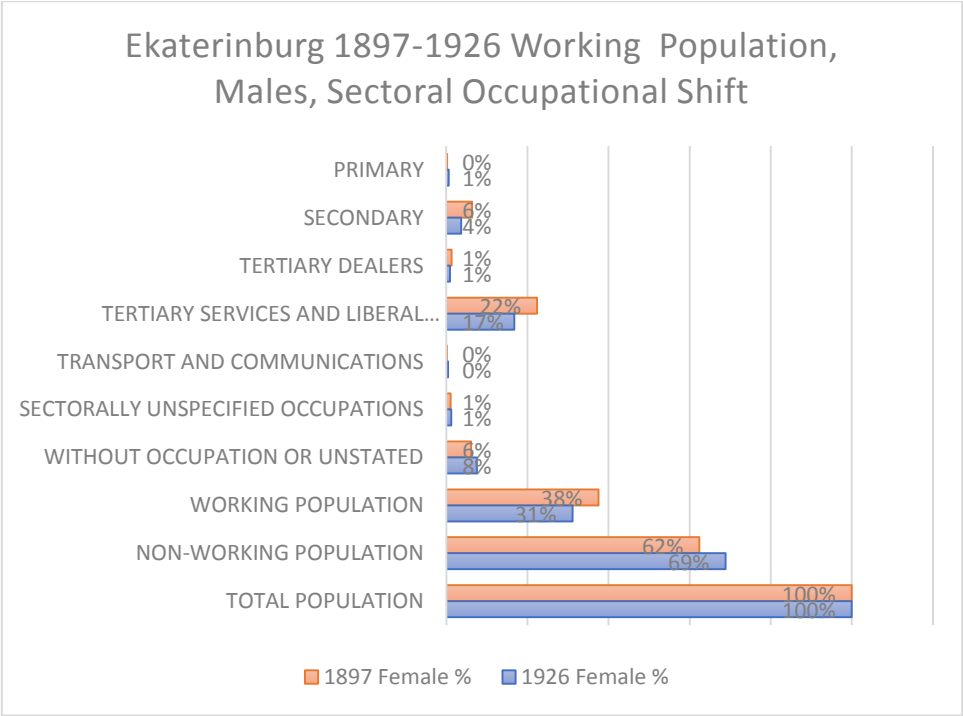
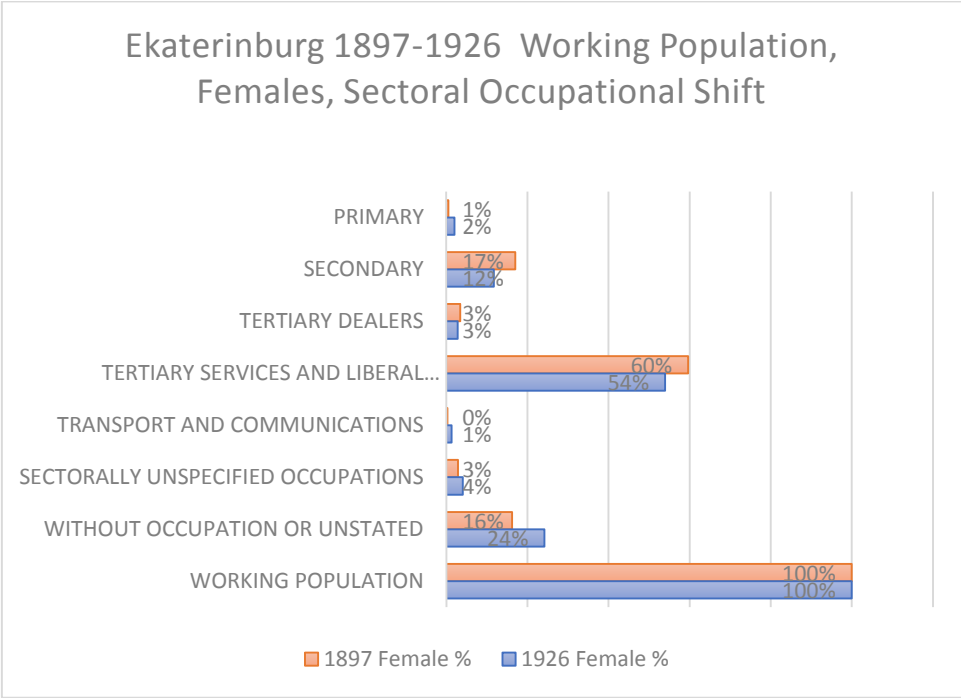


Chart 70-Ekaterinburg 1897-1926 Working Population Females, Sectoral Occupational Shift



Summary of Charts: Ekaterinburg 1897-1926, Sectoral Occupational Change

Between 1897 and 1926 according to the relevant census records, working population of Ekaterinburg gets lower from %50 to %46. Meanwhile, among working population, the share of ‘unemployment’ (‘without occupation or unstated’) soars from %11 to %21.

Regarding individual sectors, most of the newly joined persons to the total population apparently does not join into the workforce. As a result, almost none of the PSTI sectors gain more share in the occupational allocation. Newly arriving population between 1897 and 1926 either become a part of non-working population or unemployed. Notice that the overall share of tertiary services and professions remains same at %20 among total population while secondary is declining from %14 to %8. Primary sector, which has never been an occupational factor among total population, lose further %1 share, down to %1.

Among working population, 'without having an occupation' title has increased to %20. While secondary sector loses %9 of its share among working population as an occupational sector, the relevant share goes to tertiary services and professions by some extent between the two census years. Primary sector, which was as low as %3 in 1897, remains %2 in 1926 in working population. In one sentence, labour participation rate has been declined while within working population, there was a shift between secondary sectors to tertiary sector.

The rising tertiary services and professions sector is mainly due to increasing male concentration into this specific sector. Working males get from %26 to %37 share in tertiary services and occupations whereas, secondary sector lowers from %34 to %22 among working males as well as primary sector gets down from %5 to %2. The 'without an occupation' rate among males also soars from %8 to %18. While noticing labour force participation rate among males stay more or less the same around %62, migration to tertiary services and professions appears to be 'real' within total population.

Regarding female total population, since the labour force participation as well as 'without having an occupation' rate among the working population rises, not many conclusions could be developed. While among the working population tertiary services and professions are still leading despite the loss of share (%60-%54) it appears that this part of population has joined into 'without occupation or unstated' classification. While tertiary services and professions still lead the way among other PSTI sectors in 1926, female working population have lost its occupational shares within secondary and tertiary sectors.

Sub-sectoral Occupational Transformation in Ekaterinburg: 1897-1926

Secondary Sub-sectoral Occupational Allocation

Table 22-Ekaterinburg 1897 Total Population, Secondary Sub-sectoral Occupational Allocation

1897 EKATERINBURG (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
SECONDARY	4389	1475	5864	22%	6%	14%
Food industries	448	115	563	2%	0%	1%
Drink industries	18	13	31	0%	0%	0%
Tobacco industries	0	0	0	0%	0%	0%
Clothing	314	1033	1347	2%	4%	3%
Footwear	455	16	471	2%	0%	1%
Textiles	129	152	281	1%	1%	1%
Wood industries	375	0	375	2%	0%	1%
Industries using leather, bone etc.	80	8	88	0%	0%	0%
Industries producing products from fibres	40	4	44	0%	0%	0%
Furnishing	0	0	0	0%	0%	0%
Paper industries	4	0	4	0%	0%	0%
Printing	156	3	159	1%	0%	0%
Earthenware, pottery manufacture	20	0	20	0%	0%	0%
Glass industries	0	0	0	0%	0%	0%
Precious metals and jewelry	51	0	51	0%	0%	0%
Instrument making	72	0	72	0%	0%	0%
Chemical, soap, adhesives, manufacture	125	104	229	1%	0%	1%
Rubber, manufacture	0	0	0	0%	0%	0%
Fuel industries	0	0	0	0%	0%	0%
Iron and steel manufacture and products	64	0	64	0%	0%	0%
Non-ferrous metal manufacture and products	40	0	40	0%	0%	0%
Machines and tools, making and operation	678	0	678	3%	0%	2%
Road transport vehicles		0	0	0%	0%	0%
Boat and ship building	84	0	84	0%	0%	0%
Brick and tile manufacture	36	11	47	0%	0%	0%
Stone and mineral processing industries	0	0	0	0%	0%	0%
Building and construction	952	0	952	5%	0%	2%
Public Works	13	0	13	0%	0%	0%
Minor manufactures and trades	235	16	251	1%	0%	1%
SECTORALLY UNSPECIFIC OCCUPATIONS	1002	250	1252	5%	1%	3%
WITHOUT OCCUPATION AND UNSTATED	1050	1409	2459	5%	6%	6%
WORKING POPULATION	12930	8677	21607	64%	38%	50%
NON-WORKING POPULATION	7263	14419	21682	36%	62%	50%
TOTAL POPULATION	20193	23096	43289	100%	100%	100%

Chart 71- Ekaterinburg 1897 Total Population, Secondary Sub-sectoral Occupational Allocation

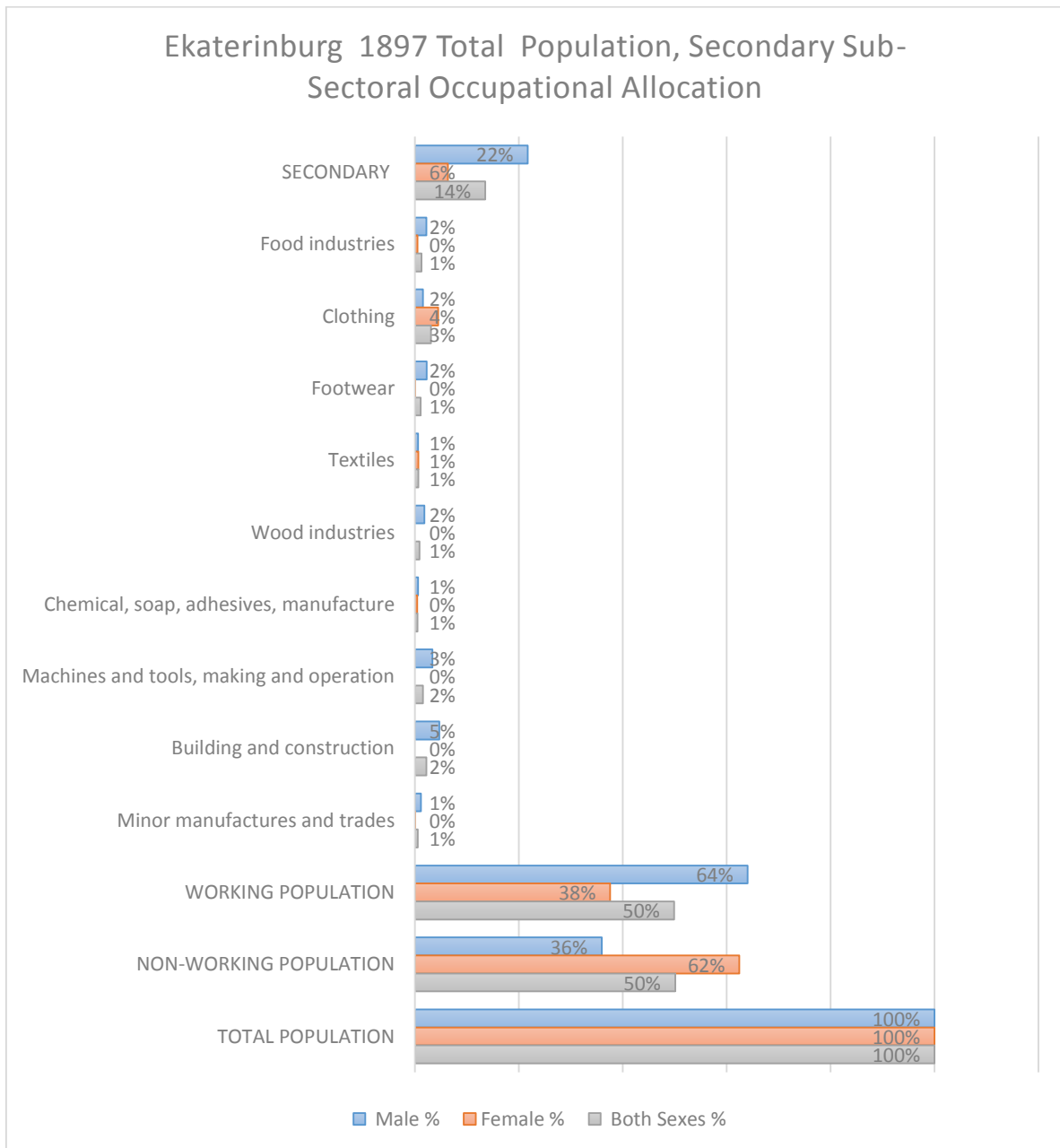


Chart 72-Ekaterinburg 1897 Working Population, Secondary Sub-sectoral Occupational Allocation

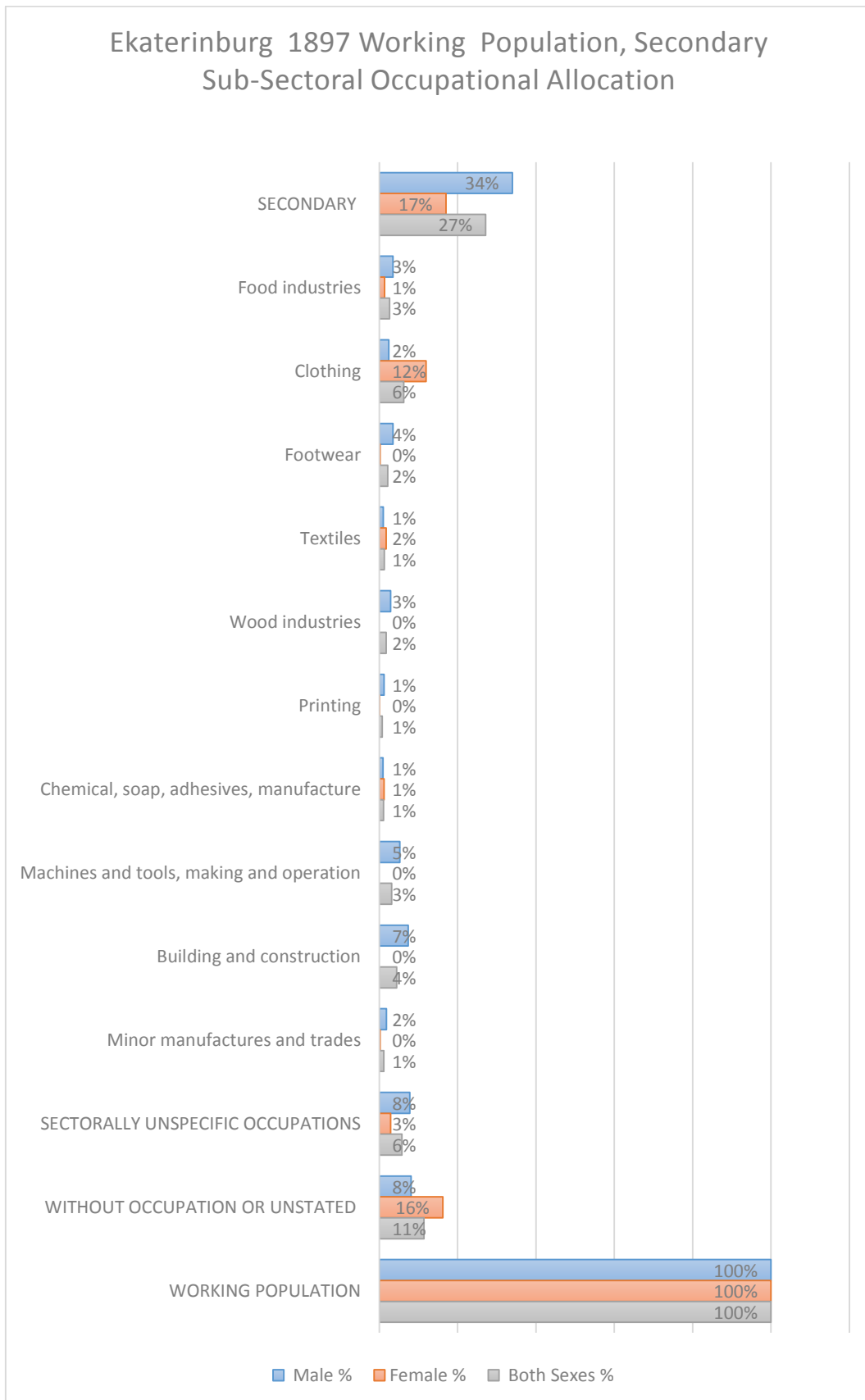
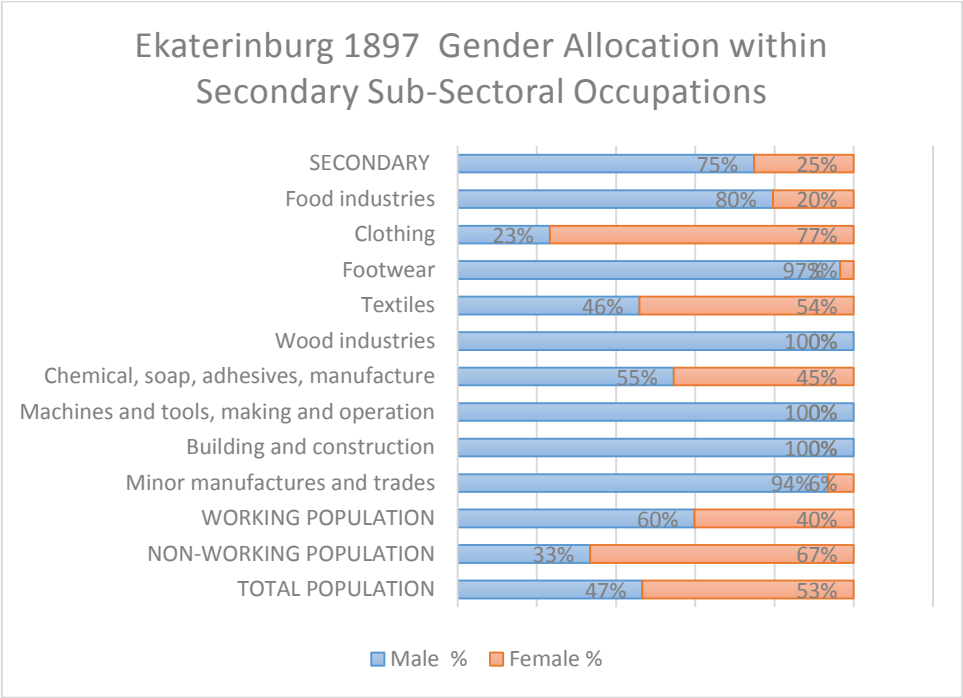


Chart 73-Ekaterinburg 1897 Gender Allocation within Secondary Sub-sectoral Occupations



Summary of Charts: Ekaterinburg 1897, Secondary Sub-sectoral Allocation

Regarding 1897 secondary Sub-sectoral allocation in Ekaterinburg, according to our analysis, the allocation is hugely diversified. This would mean there is no one sub-sector that we would mention as a prominent sub-sector within neither total nor total population.

Nevertheless, we could mentioned that there are %27 of all working population and 5864 persons of working population by occupation, in the secondary sector. The most prominent sub-sector is the clothing. Clothing, having %6 share within working population is primarily, filled by female working population. Consumer demand related industries such as food industries or building and construction along with textiles, footwear and clothing having around %10 of all working population. Machines and tools and wood industries, which could be partly related with heavy industry also have some slight prominence.

Regarding 1897 Census registers for the city of Ekaterinburg, we could observe that among males, the leading Sub-sectoral occupations are more 'heavy-industry' related activities like building and construction, machines and tools, making and operation as well as wood industries. One another prominent Sub-sectoral occupation among working males is footwear as well as food industries.

Among females, the main concentration is around clothing sub-sector where for 70% of females, clothing is their registered Sub-sectoral occupation. Secondly, textiles also appears to have some importance by %10 share.

Overall, secondary sub-sector occupations among working population are concentrated around clothing, building and construction, food industries and footwear. One heavy-industry related industry is machines and tools, making and operation sub-sector which has a considerable %12 share among all secondary sector Sub-sectoral occupations.

When we come to gender distribution within secondary sector among sub-sectors, we see that males were expectedly concentrated in more heavy-industry related occupations as building and construction as well as machine making and tool implementing, while females were in a great extent, having occupations under clothing and textile sub-sector. Overall, secondary sector was dominated by males by %75 to %25 gender allocation.

Table 23- Ekaterinburg 1926 Total Population, Secondary Sub-sectoral Occupational Allocation

1926 EKATERINBURG (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
SECONDARY	8742	2592	11334	13%	4%	8%
Other Secondary	87	16	103	0%	0%	0%
Food industries	541	153	694	1%	0%	1%
Tobacco industries	9	36	45	0%	0%	0%
Clothing	486	784	1270	1%	1%	1%
Textiles	356	1239	1595	1%	2%	1%
Wood industries	692	19	711	1%	0%	1%
Industries using leather, bone etc.	656	50	706	1%	0%	1%
Industries producing products from fibres	0	0	0	0%	0%	0%
Paper industries	9	64	73	0%	0%	0%
Printing	494	156	650	1%	0%	0%
Earthenware, pottery manufacture	51	2	53	0%	0%	0%
Glass industries	0	0	0	0%	0%	0%
Precious metals and jewellery	96	1	97	0%	0%	0%
Chemical, soap, adhesives, manufacture	7	10	17	0%	0%	0%
Rubber, manufacture	0	0	0	0%	0%	0%
Fuel industries	591	11	602	1%	0%	0%
Iron and steel manufacture and products	584	3	587	1%	0%	0%
Non-ferrous metal manufacture and products	72	1	73	0%	0%	0%
Metal working	172	0	172	0%	0%	0%
Machines and tools, making and operation	1890	8	1898	3%	0%	1%
Brick and tile manufacture	38	15	53	0%	0%	0%
Building and construction	1890	22	1912	3%	0%	1%
Mining	21	2	23	0%	0%	0%
SECTORALLY UNSPECIFIC OCCUPATIONS	2751	897	3648	4%	1%	3%
WITHOUT OCCUPATION OR UNSTATED	7433	5370	12803	11%	8%	9%
Unemployed	2634	2640	5274	4%	4%	4%
Uncertain status	4799	2730	7529	7%	4%	6%
WORKING POPULATION	40240	22184	62424	62%	31%	46%
NON-WORKING POPULATION	24622	49105	73727	38%	69%	54%
TOTAL POPULATION	64862	71289	136151	100%	100%	100%

Chart 74- Ekaterinburg 1926 Total Population Secondary Sub-sectoral Occupational Allocation

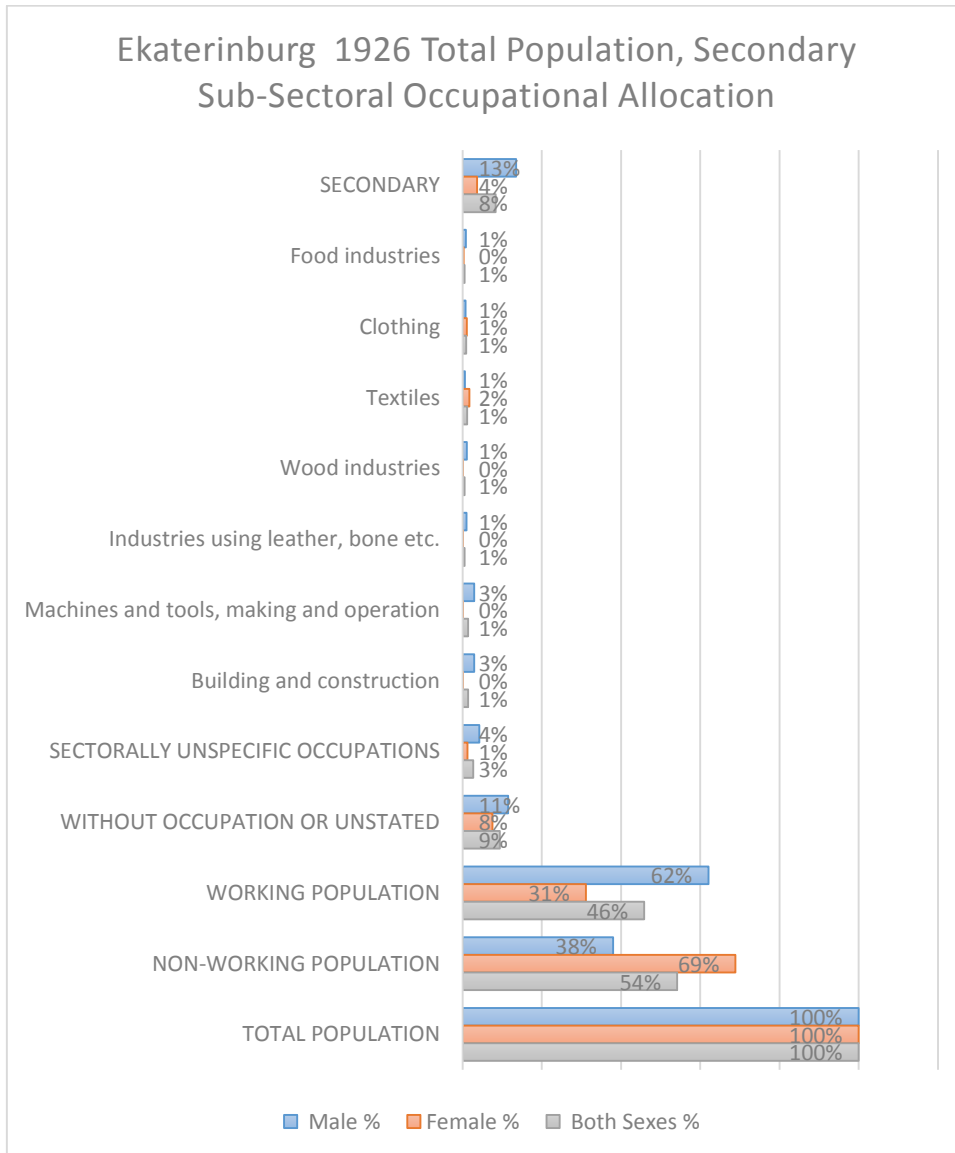


Chart 75- Ekaterinburg 1926 Working Population, Secondary Sub-sectoral Occupational Allocation

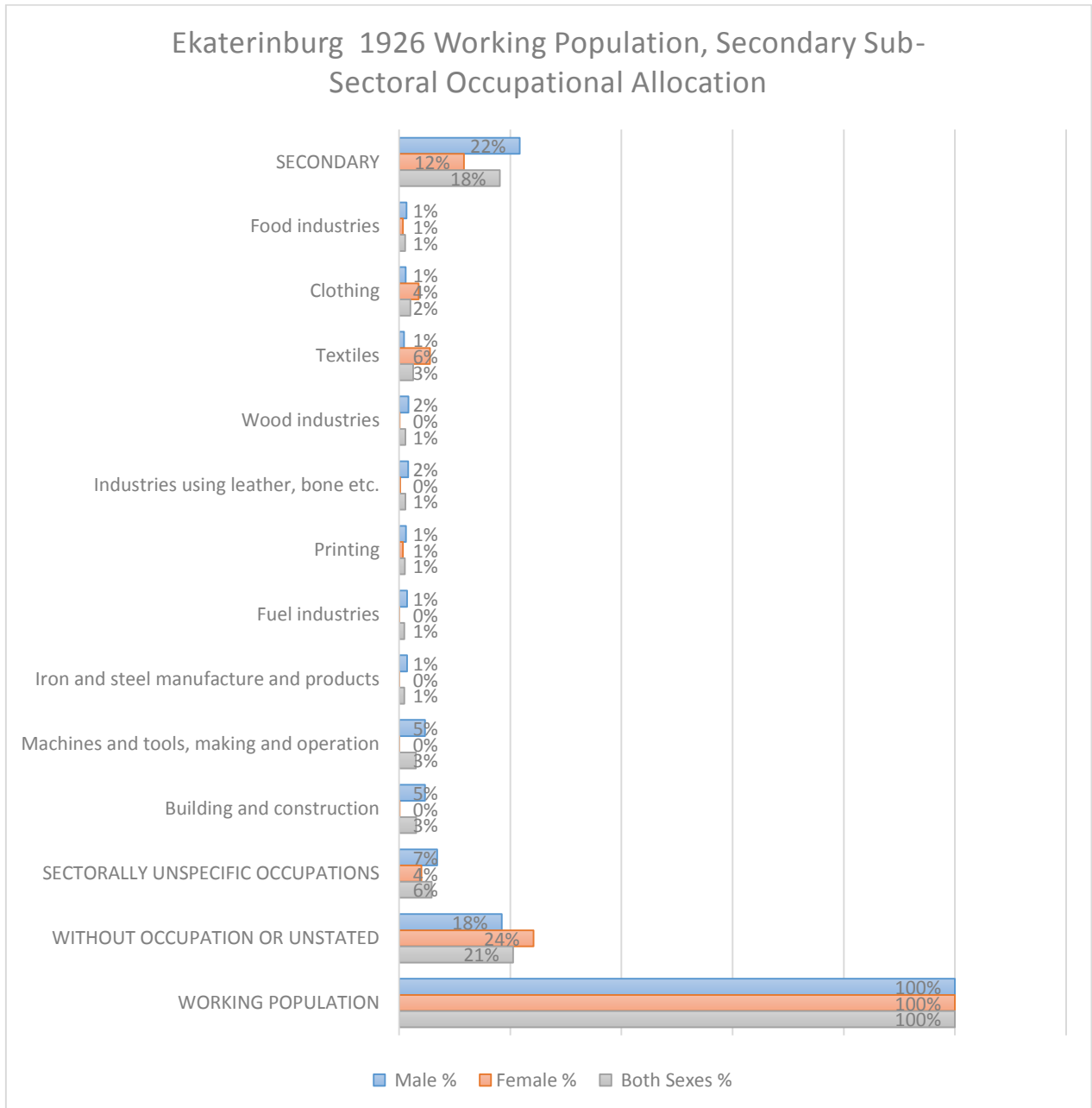
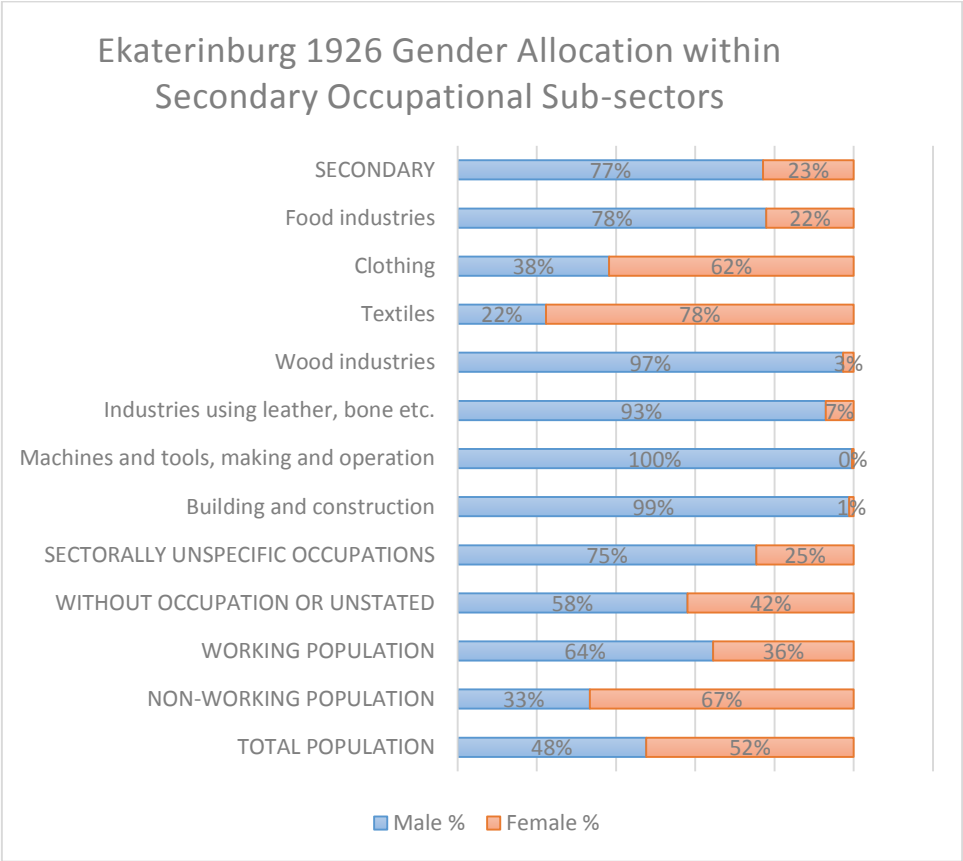


Chart 76- Ekaterinburg 1926 Gender Allocation within Secondary Occupational Sub-sectors



Summary of Charts: Ekaterinburg 1926 Secondary Sub-sectoral Occupational Allocation

Regarding Census 1926, according to results obtained from our study, the share of secondary sector occupations among total population is %13 while %62 of the total population has been labelled as ‘working population’. Secondary sector has more occupational prominence among males and females.

Among secondary sector working males, the Sub-sectoral concentration is on building and construction, machines and tools, making and operation iron and steel manufacture and products as well as fuel industries While around %10 of working population has occupations among this sector, a considerable %7 of working population has been labelled as ‘sectorally unspecified’

Among females, the concentration is around 'light industries' like clothing, textiles or cloth printing while only %10 of working population among females is having an occupation under secondary sector title. The rate of 'without occupation 'title is very high around %24.

Regarding gender breakdown of individual sub-sectors, while females are having the dominance in total population (%52-%48), males have the upper edge in working population (%64-%36). Secondary sector, has been largely dominated with males with the exception of clothing and textile Sub-sectoral occupations.

General Outlook: Ekaterinburg Secondary Sub-sectoral Occupational Shift between 1897-1926

Chart 77-Ekaterinburg 1897-1926 Total Population, Both Sexes, Secondary Sub-sectoral Occupational Shift

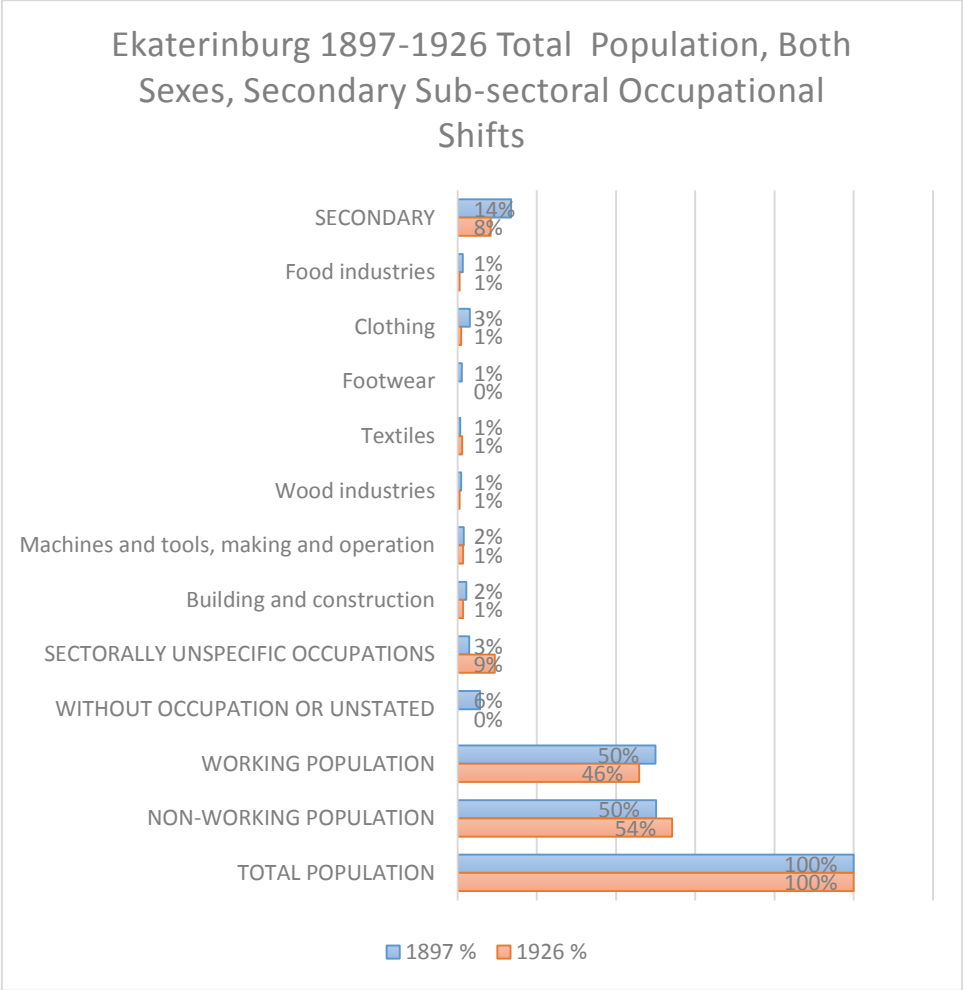


Chart 78- Ekaterinburg 1897-1926 Working Population, Both Sexes, Secondary Sub-sectoral Occupational Shift

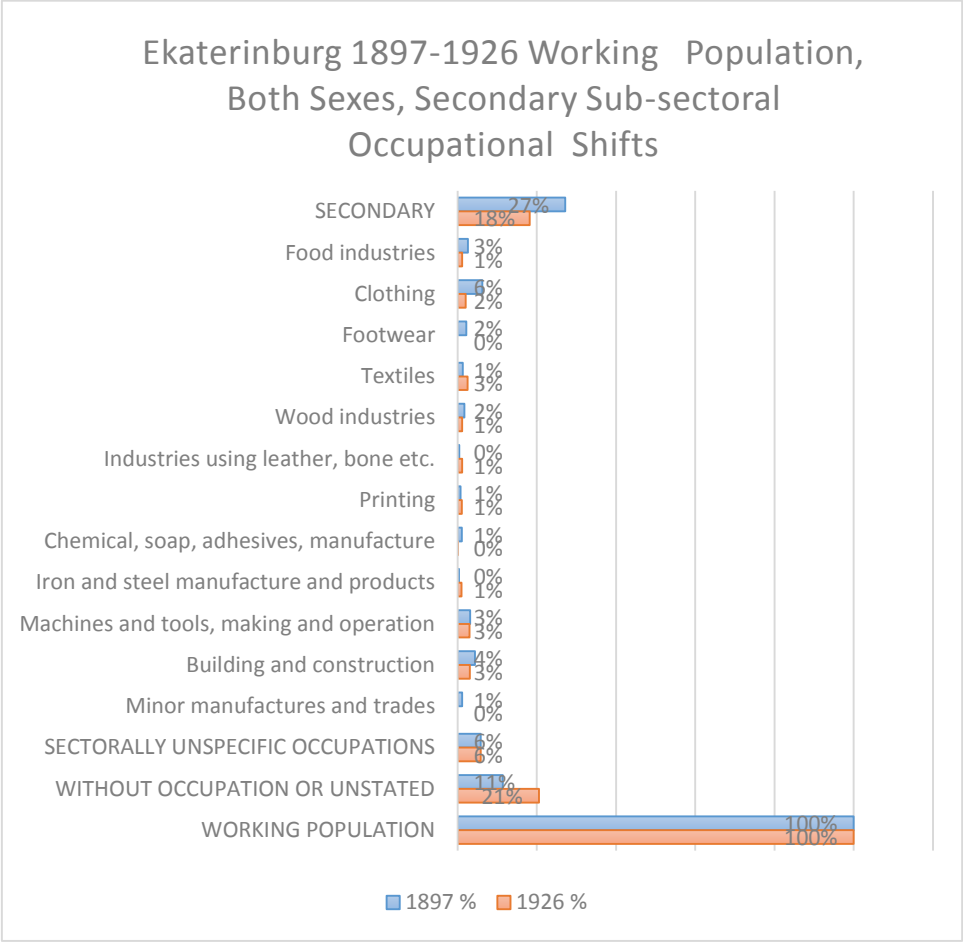


Chart 79- Ekaterinburg 1897-1926 Total Population, Males, Secondary Sub-sectoral Occupational Shift

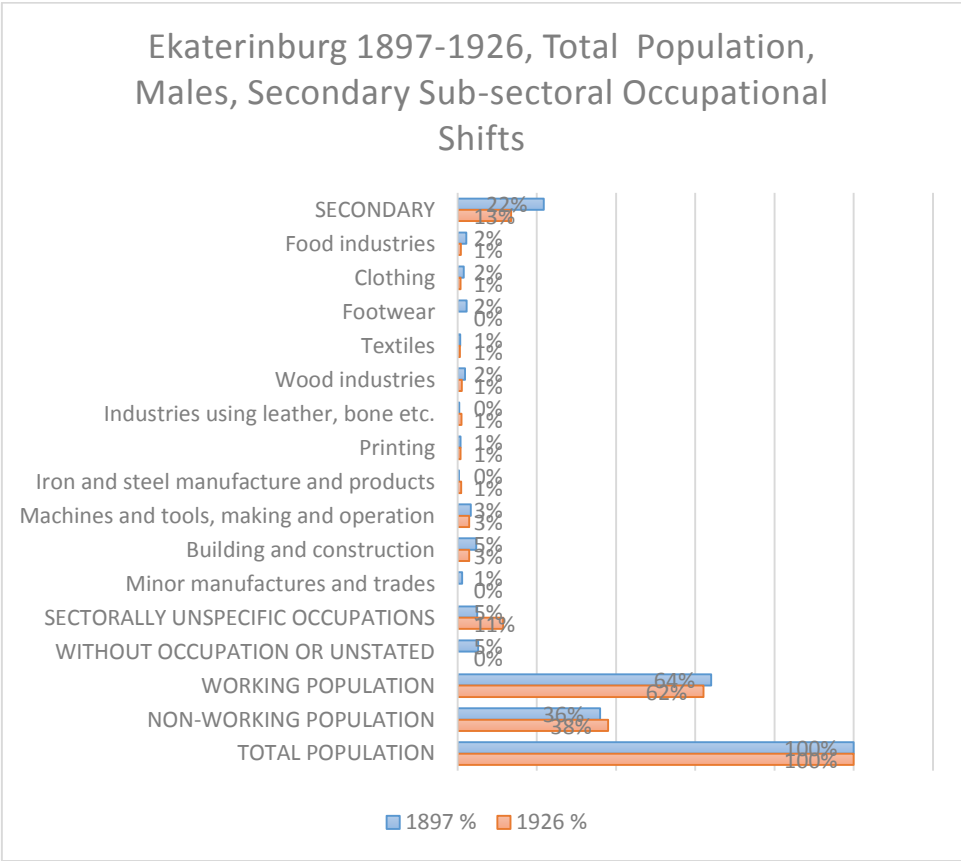


Chart 80- Ekaterinburg 1897-1926 Working Population, Males, Secondary Sub-sectoral Occupational Shift

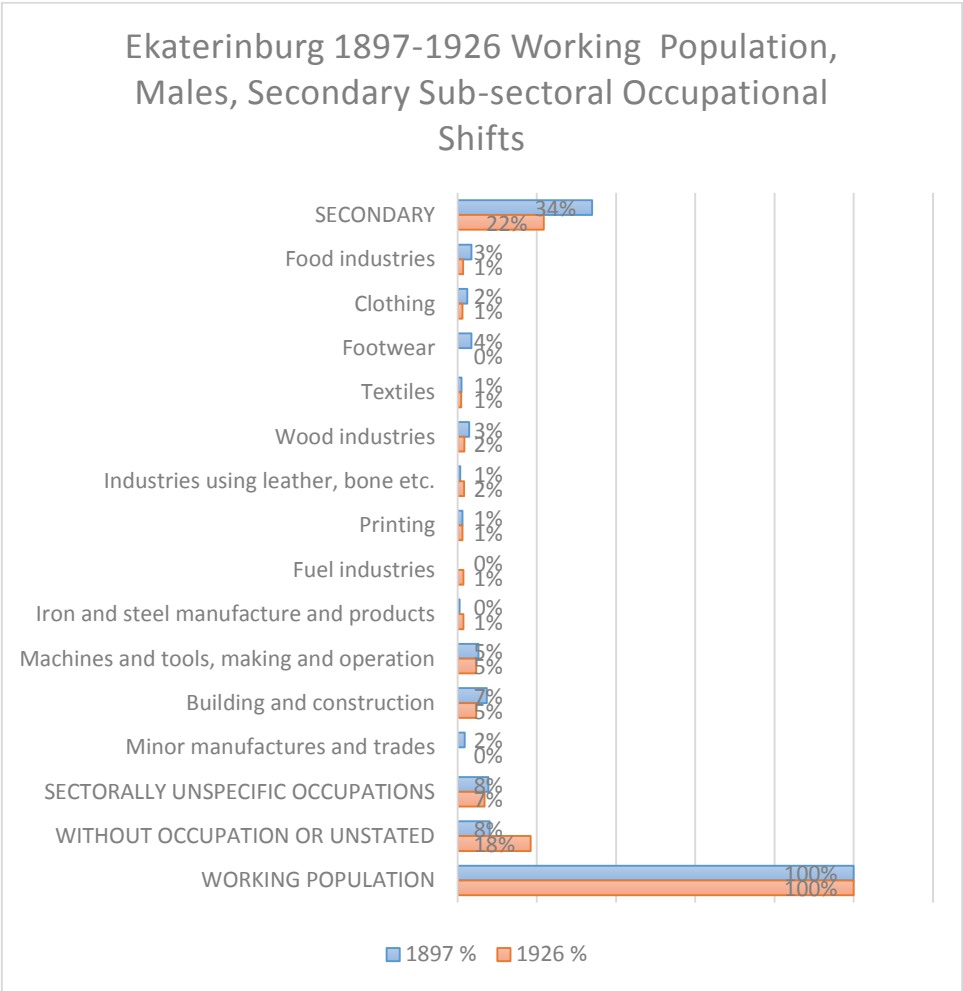


Chart 81- Ekaterinburg 1897-1926 Total Population, Females, Secondary Sub-sectoral Occupational Shift

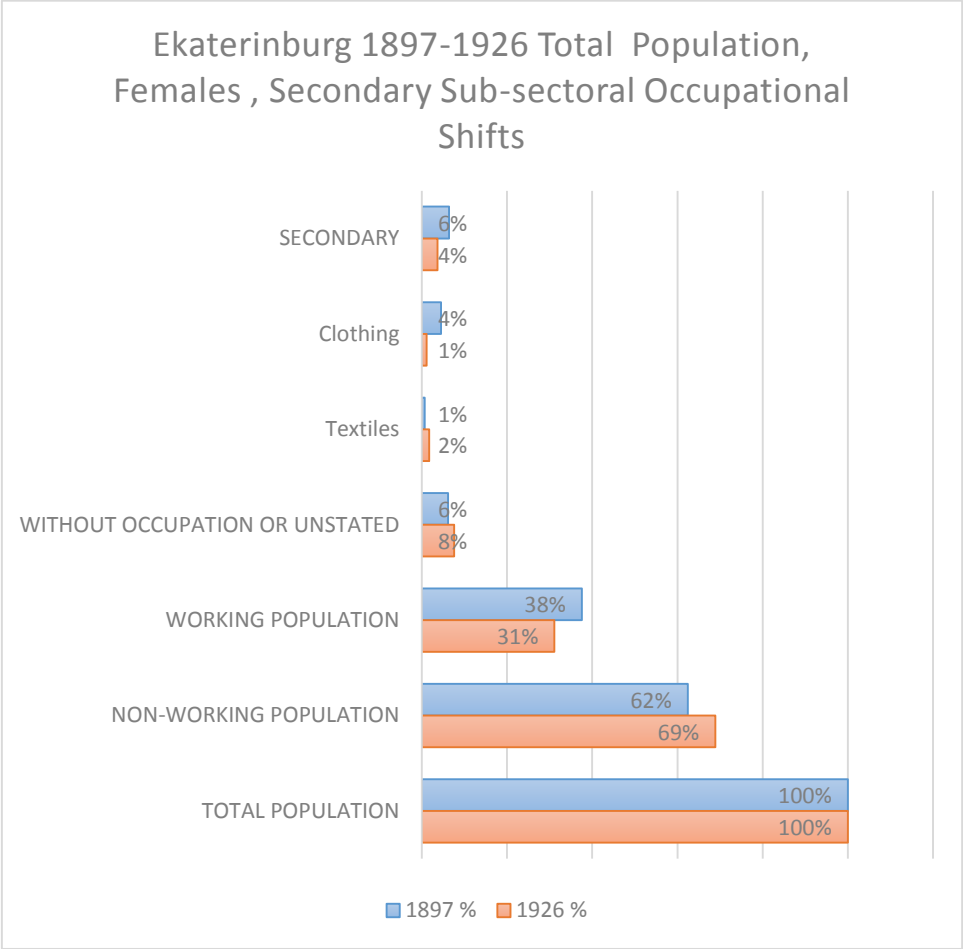
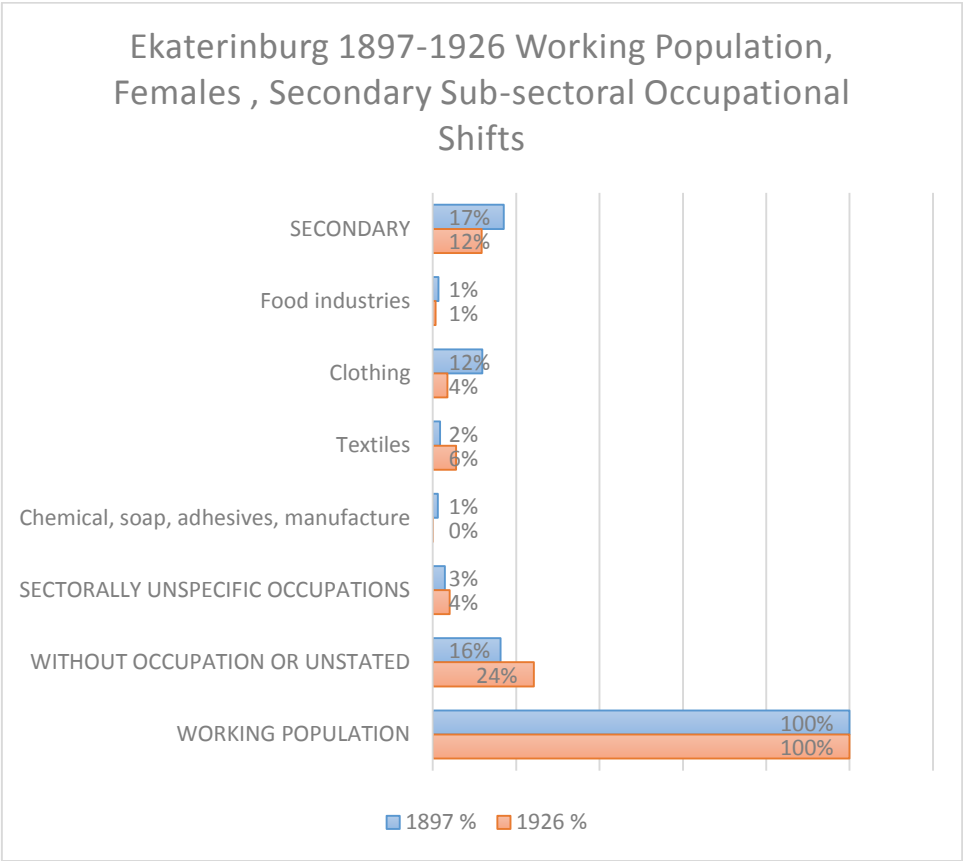


Chart 82- Ekaterinburg 1897-1926 Working Population, Females, Secondary Sub-sectoral Occupational Shift



Summary of Charts: Ekaterinburg 1897-1926, Secondary Sub-sectoral Allocation

Between 1897 and 1926, we can notice that the secondary sector has been decreased in shares, from %14 to %8 in total while %27 to %18 among working population.

Looking at all secondary Sub-sectoral shares, it would not be possible to claim that any secondary Sub-sectoral occupation had some remarkable gain in prominence. While light industries, such as clothing, food industries and etc. with the exception of textiles, gets lower in the share; more factory based, heavy industry related sectors like machine building and tool implementing, building and construction or fuel industries have added on their shares, albeit in a very small margin. Between 1897 and 1926 we have an absolute among of rise among female population those who were listed as having an occupation under secondary sector (1475 to 2392) while lose some share among all female working population. (%17 to %12)

Regarding males, the share of sectorally unspecific population is rising and this could be worth noticing. In this study, in a large extent, generally, the sectorally unspecific title has been given to general labourers and this would indicate a rising rate in the factory occupations.

Regarding females, the prominence of clothing have been changed with textiles, which is a more mechanized, lower level production activity .i.e. textiler, produced from fiber while clothing worker would be taking a part in the sewing process.

Tertiary Sub-sectoral Occupational Allocation ²⁰⁸

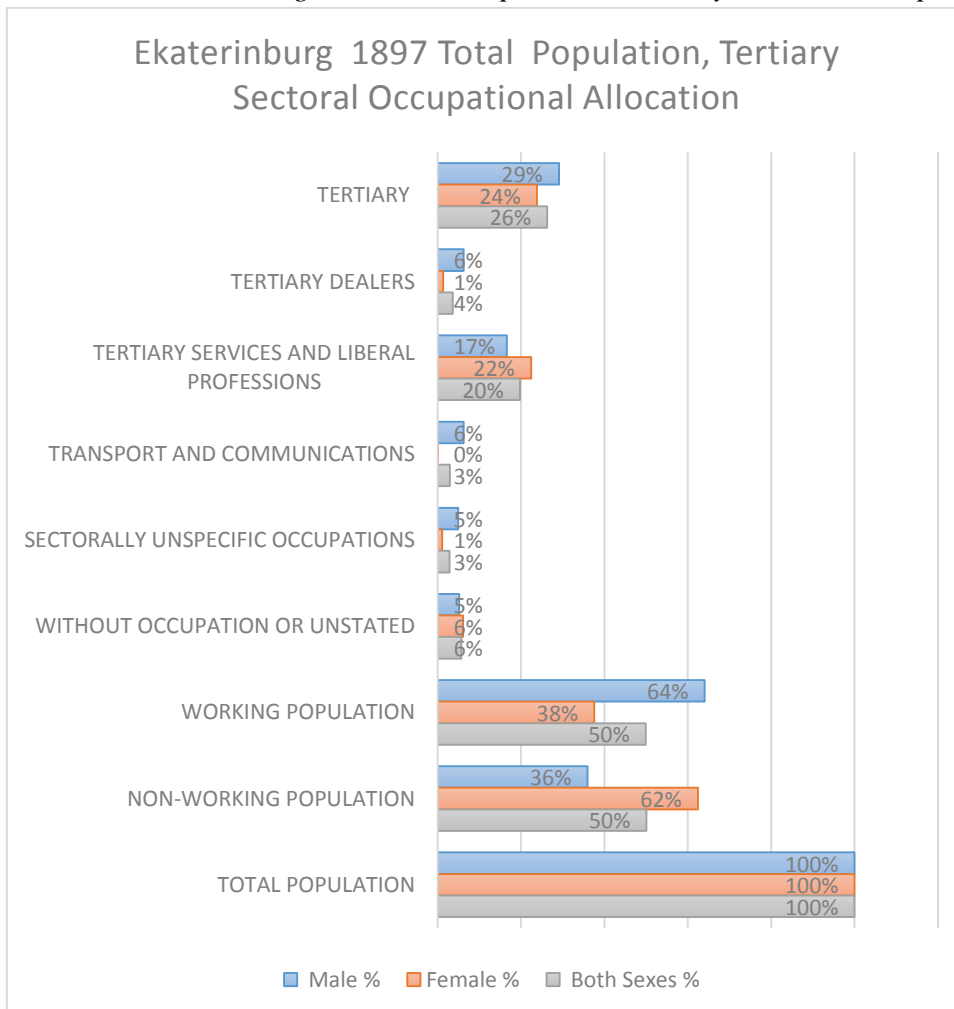
Table 24- Ekaterinburg 1897, Total Population, Tertiary Sub-sectoral Occupational Allocation

1897 EKATERINBURG (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
TERTIARY	5879	5497	11376	29%	24%	26%
TERTIARY DEALERS	1263	298	1561	6%	1%	4%
Other Tertiary Dealers	146	34	180	1%	0%	0%
Dealers in food	521	163	684	3%	1%	2%
Dealers in drink	129	30	159	1%	0%	0%
Dealers in tobacco	0	0	0	0%	0%	0%
Dealers in live animals	3	0	3	0%	0%	0%
Dealers in clothing and clothing accessories	63	21	84	0%	0%	0%
Dealers in textiles and products	182	8	190	1%	0%	0%
Dealers in wood and wood products	10	0	10	0%	0%	0%
Dealers in leather, hair and related animal products	41	6	47	0%	0%	0%
Dealers in fibrous vegetable products	0	0	0	0%	0%	0%
Dealers in paper and paper products	0	0	0	0%	0%	0%
Dealers in printed products	10	3	13	0%	0%	0%
Dealers in earthenware, pottery	22	9	31	0%	0%	0%
Dealers in precious metals and jewellery	23	7	30	0%	0%	0%
Dealers in instruments	0	0	0	0%	0%	0%
Dealers in chemicals and chemical products	28	7	35	0%	0%	0%
India rubber, gutta percha dealers	0	0	0	0%	0%	0%
Fuel dealers	17	0	17	0%	0%	0%
Dealers in iron and steel, and iron and steel products	68	10	78	0%	0%	0%
Dealers in machines, tools	0	0	0	0%	0%	0%
Dealers in stone and stone products	0	0	0	0%	0%	0%
Dealers in minor products	0	0	0	0%	0%	0%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	3359	5175	8534	17%	22%	20%
Other Tertiary Services and Professions	0	0	0	0%	0%	0%
Food, drink and accommodation services	96	139	235	0%	1%	1%
Entertainment	27	134	161	0%	1%	0%
Miscellaneous service industries	607	569	1176	3%	2%	3%
Domestic service	848	3117	3965	4%	13%	9%
Financial services and professions	76	4	80	0%	0%	0%
Commercial and administrative services	196	23	219	1%	0%	1%
Professions	431	797	1228	2%	3%	3%
Professional support	40	50	90	0%	0%	0%
Local government service	102	0	102	1%	0%	0%
National government service	594	2	596	3%	0%	1%

²⁰⁸ Tertiary Sector is composed of Tertiary Dealers, Tertiary Sellers, Tertiary Services and Liberal Professions and Transport and Communication.

Armed forces	225	0	225	1%	0%	1%
Owners, possessors of capital	117	340	457	1%	1%	1%
TRANSPORT AND COMMUNICATIONS	1257	24	1281	6%	0%	3%
Other Transportation	0	0	0	0%	0%	0%
Road transport (animal power)	715	4	719	4%	0%	2%
Inland navigation	1	0	1	0%	0%	0%
Rail transport	380	11	391	2%	0%	1%
Communications	161	9	170	1%	0%	0%
SECTORALLY UNSPECIFIC OCCUPATIONS	1002	250	1252	5%	1%	3%
WITHOUT OCCUPATION AND UNSTATED	1050	1409	2459	5%	6%	6%
WORKING POPULATION	12930	8677	21607	64%	38%	50%
NON-WORKING POPULATION	7263	14419	21682	36%	62%	50%
TOTAL POPULATION	20193	23096	43289	100%	100%	100%

Chart 83- Ekaterinburg 1897 Total Population, Tertiary Sectoral Occupational Allocation²⁰⁹



²⁰⁹ The total share of Tertiary Sector is the sum of four branches(Tertiary sellers or dealers, tertiary service sor liberal professions, transport and communications) only. Other titles in the graph, as “Sectorally Unspecific”, “Without Occupation or unstated” as well as “Working Population” and “Non-Working Population” would not be included into shares of tertiary sector.

Chart 84-Ekaterinburg 1897 Total Population, Tertiary Sub-sectoral Occupational Allocation

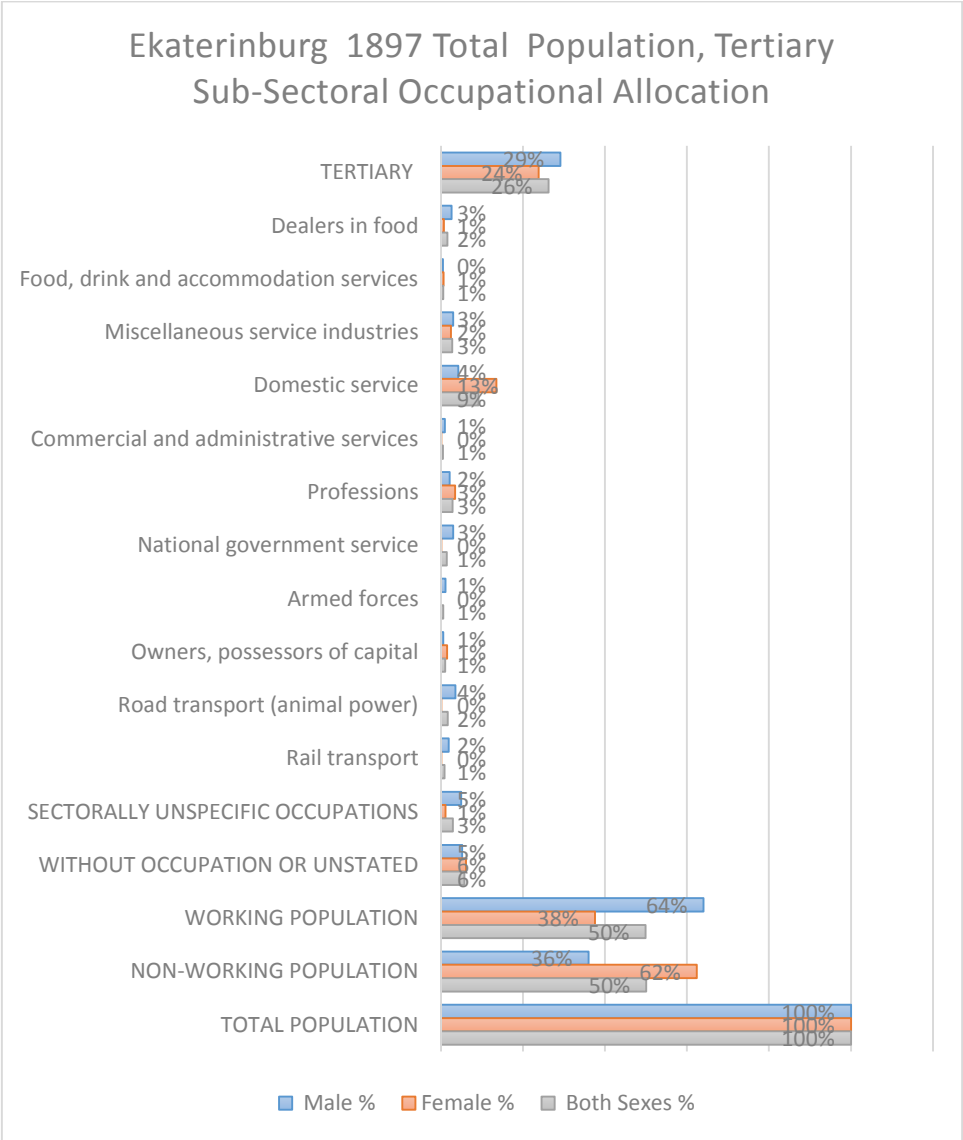


Chart 85- Ekaterinburg 1897 Working Population, Tertiary Sectoral Occupational Allocation

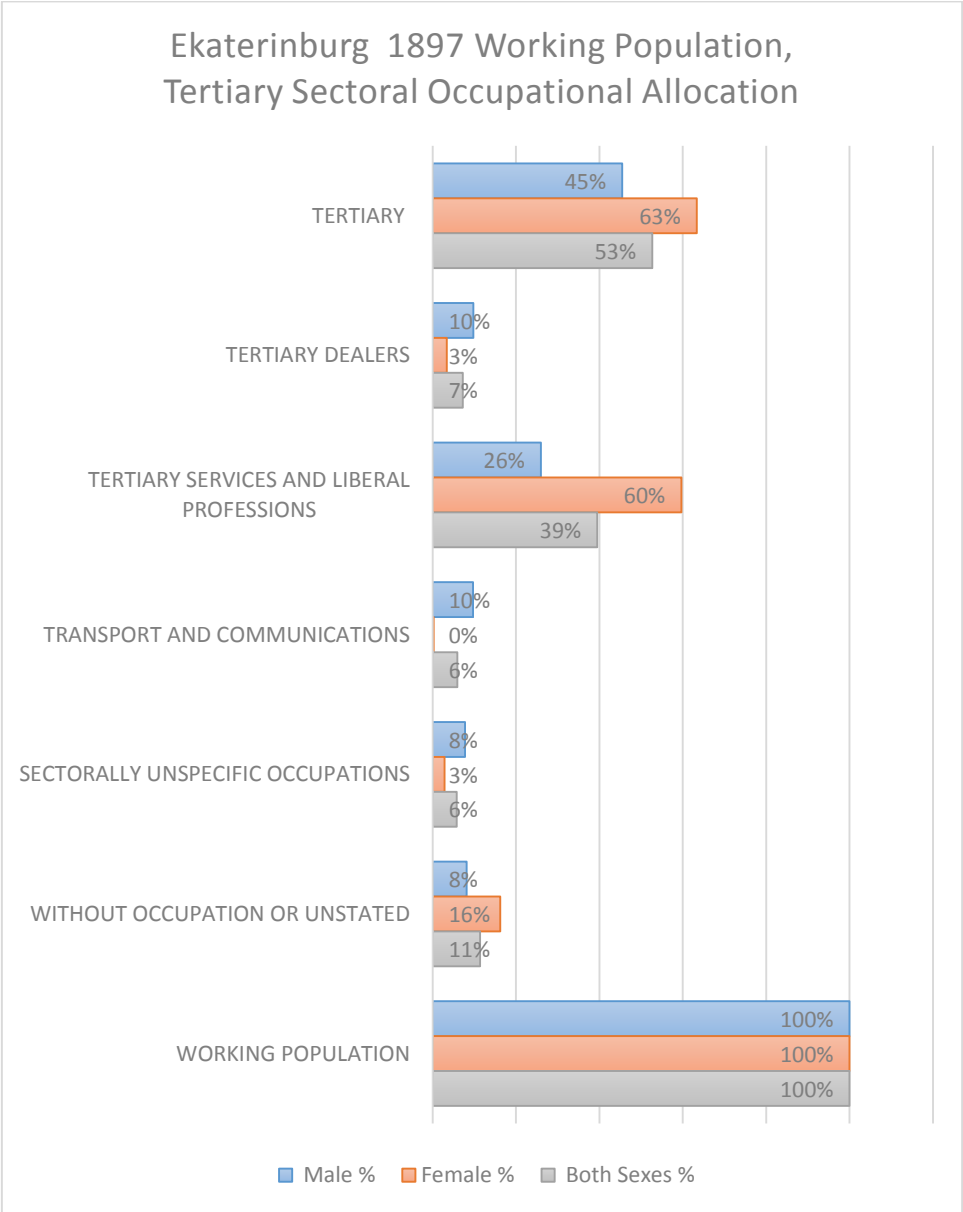


Chart 86- Ekaterinburg 1897 Working Population, Tertiary Sub-sectoral Occupational Allocation

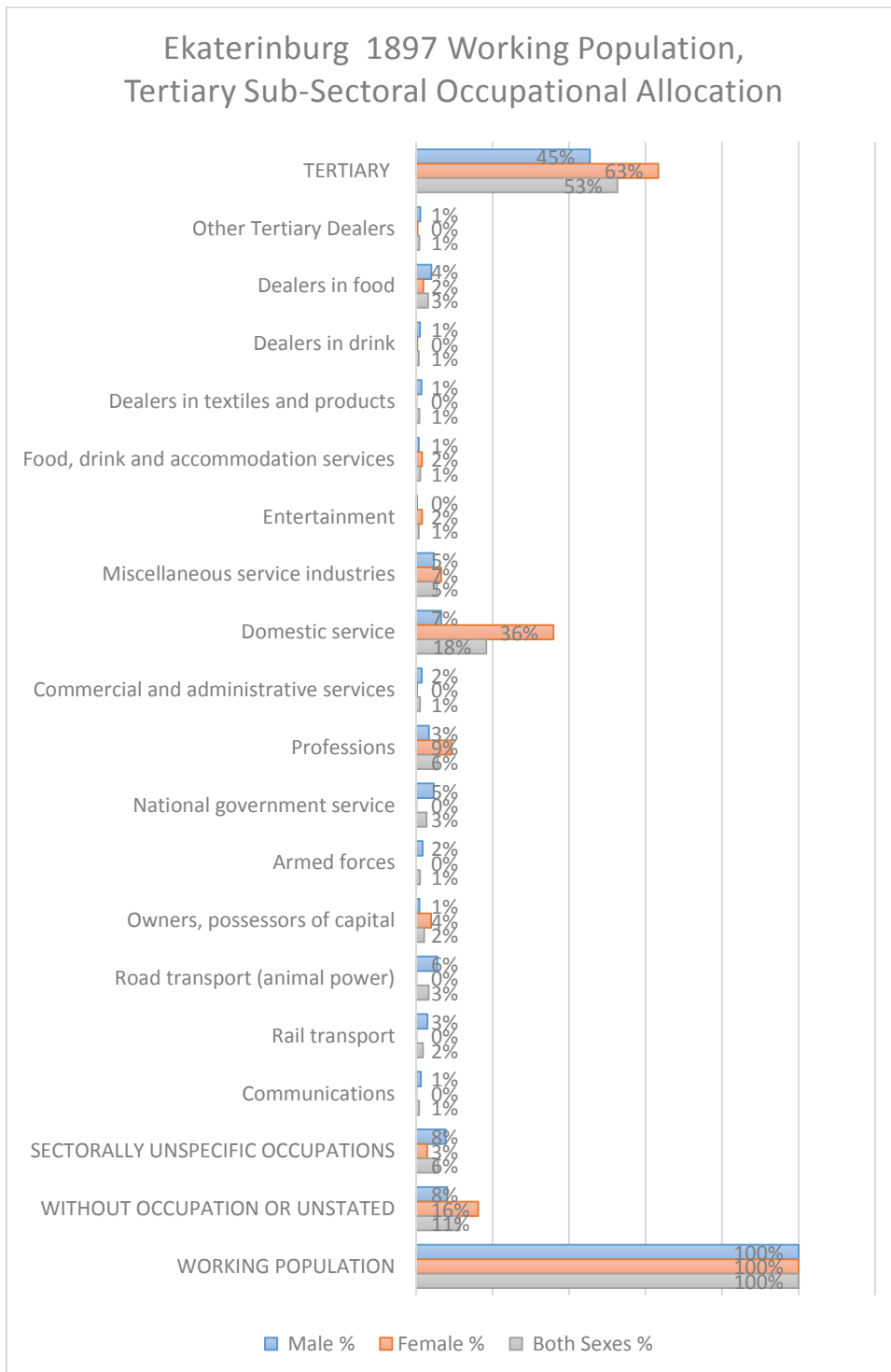


Chart 87- Ekaterinburg 1897 Gender Allocation within Tertiary Occupational Sectors

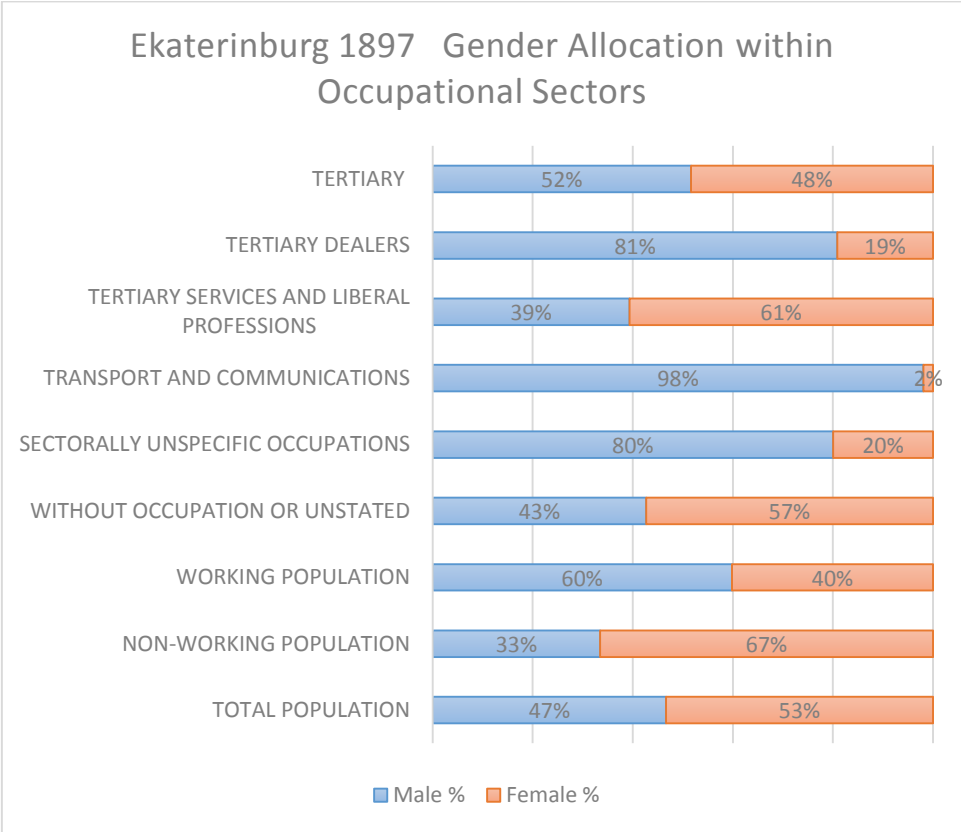
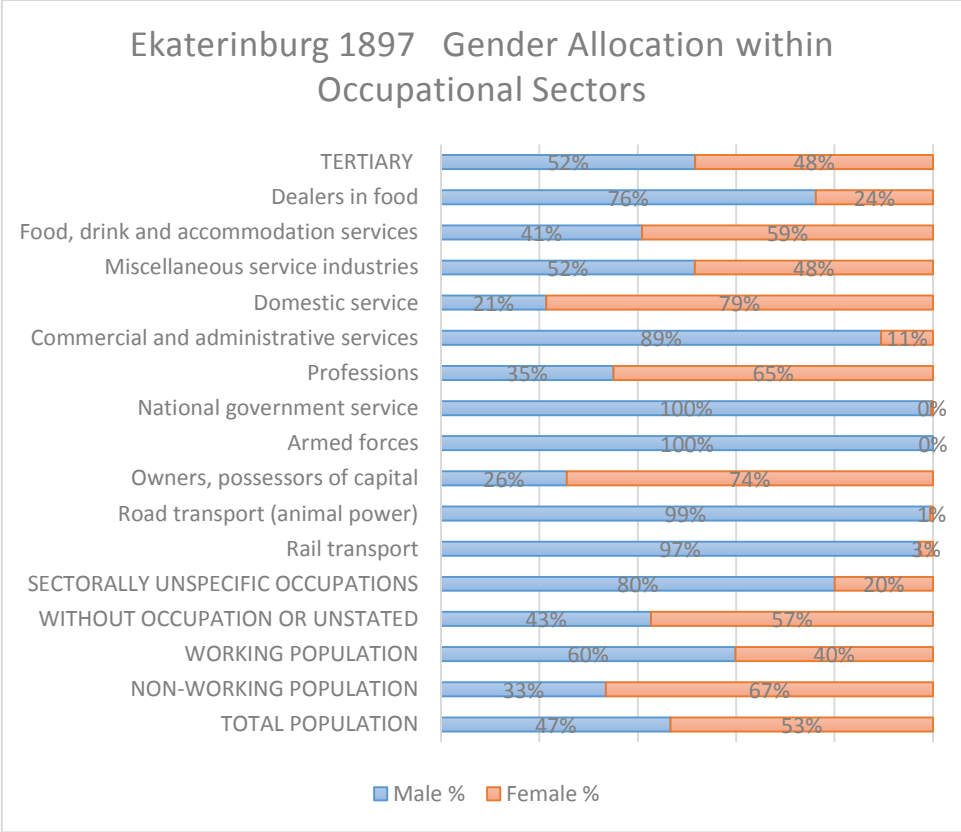


Chart 88 Ekaterinburg 1897 Gender Allocation within Tertiary Occupational Sub-sectors



Summary of Charts: Ekaterinburg 1897 Tertiary Sub-sectoral Occupational Allocation

Ekaterinburg 1897 has an occupational share of %29 for both sexes combined while working population rate is %64. This would mean, overall, tertiary sector stands as the most important sector in Ekaterinburg. Among the tertiary sector branches, tertiary sector and professions have %20 of the total population as well as transport and communication has a considerable %6 share along with tertiary dealers. There is a clear gender distinction among tertiary sector branches. While females are concentrated on tertiary services and professions, males have a more diversified scheme among tertiary sector branches, transport and communication having %6 along with tertiary services, %17.

Looking at tertiary sector Sub-sectoral allocations, we observe that in Ekaterinburg, according to the census records of 1897, the most prominent tertiary occupational sub-sector was domestic service. Especially among female working population, domestic service stands as a significantly central Sub-sectoral occupation. The next most significant sub-sector for working females is the liberal professions as well as owners, possessors of capital has a considerable share.

As for males, domestic service and professions also stand as the main leading tertiary Sub-sectoral occupation. However, unlike females, national and local government service as well as road and rail transportation are the highly concentrated tertiary Sub-sectoral occupations.

Looking more closely at the gender breakdown of all individual tertiary branches and sub-sectors, we could observe that especially regarding ‘tertiary services and professions’ female domination was observed although males have the majority against females considering all tertiary sector branches and sub-sectors. (%52-%48) Males are also the majority in tertiary dealers and transportation branches. When professions and owners, possessors of capital considered, females are relatively larger in numbers against males.

Table 25- Ekaterinburg 1926 Total Population, Tertiary Sub-sectoral Occupational Allocation

1926 EKATERINBURG (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
TERTIARY SELLERS	1566	625	2191	2%	1%	2%
Other Tertiary Sellers	933	248	1181	1%	0%	1%
Small traders	633	377	1010	1%	1%	1%
TERTIARY SERVICES AND PROFESSIONS	14886	11969	26855	23%	17%	20%
Other Tertiary Services and Professions	169	74	243	0%	0%	0%
Food, drink and accommodation services	176	1653	1829	0%	2%	1%
Storage	331	8	339	1%	0%	0%
Entertainment	151	48	199	0%	0%	0%
Media	0	0	0	0%	0%	0%
Miscellaneous service industries	1879	2105	3984	3%	3%	3%
Domestic service	1	2288	2289	0%	3%	2%
Financial services and professions	2744	851	3595	4%	1%	3%
Commercial and administrative services	4394	2654	7048	7%	4%	5%
Professions	1966	719	2685	3%	1%	2%
Professional support	132	838	970	0%	1%	1%
Local government service	284	14	298	0%	0%	0%
National government service	878	26	904	1%	0%	1%
Armed forces	1590	0	1590	2%	0%	1%
Owners, possessors of capital	191	691	882	0%	1%	1%
TRANSPORT AND COMMUNICATIONS	4097	293	4390	6%	0%	3%
Transport and Communications	472	20	492	1%	0%	0%
Road transport (animal power)	1842	21	1863	3%	0%	1%
Road transport (motorised)	48	0	48	0%	0%	0%
Sea transport	17	0	17	0%	0%	0%
Rail transport	1563	53	1616	2%	0%	1%
Communications	155	199	354	0%	0%	0%
SECTORALLY UNSPECIFIC OCCUPATIONS	2751	897	3648	4%	1%	3%
WITHOUT OCCUPATION OR UNSTATED	7433	5370	12803	11%	8%	9%

Unemployed	2634	2640	5274	4%	4%	4%
Uncertain status	4799	2730	7529	7%	4%	6%
WORKING POPULATION	40240	22184	62424	62%	31%	46%
NON-WORKING POPULATION	24622	49105	73727	38%	69%	54%
TOTAL POPULATION	64862	71289	136151	100%	100%	100%

Chart 89- Ekaterinburg 1926 Total Population, Tertiary Sectoral Occupational Allocation

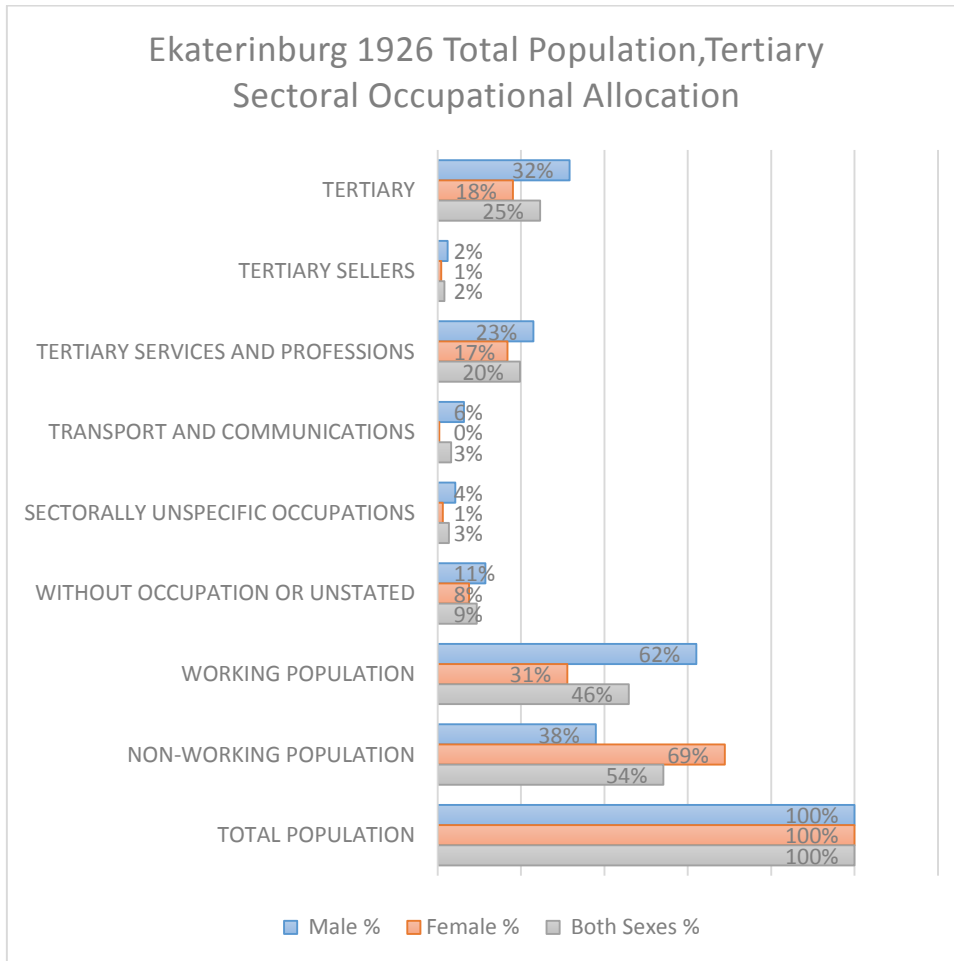


Chart 90-- Ekaterinburg 1926 Total Population, Tertiary Sub-sectoral Occupational Allocation

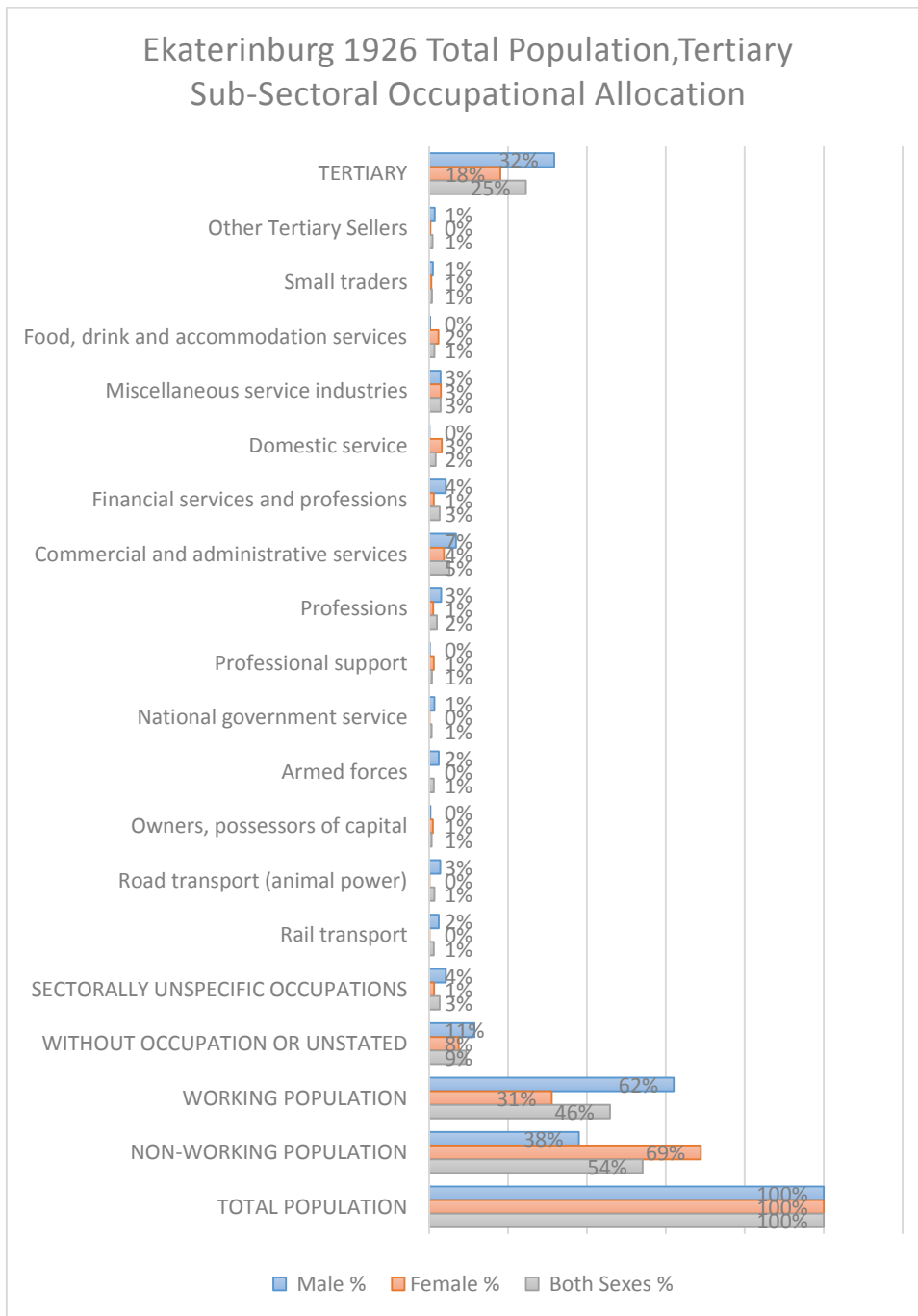


Chart 91- Ekaterinburg 1926 Working Population, Tertiary Sectoral Occupational Allocation

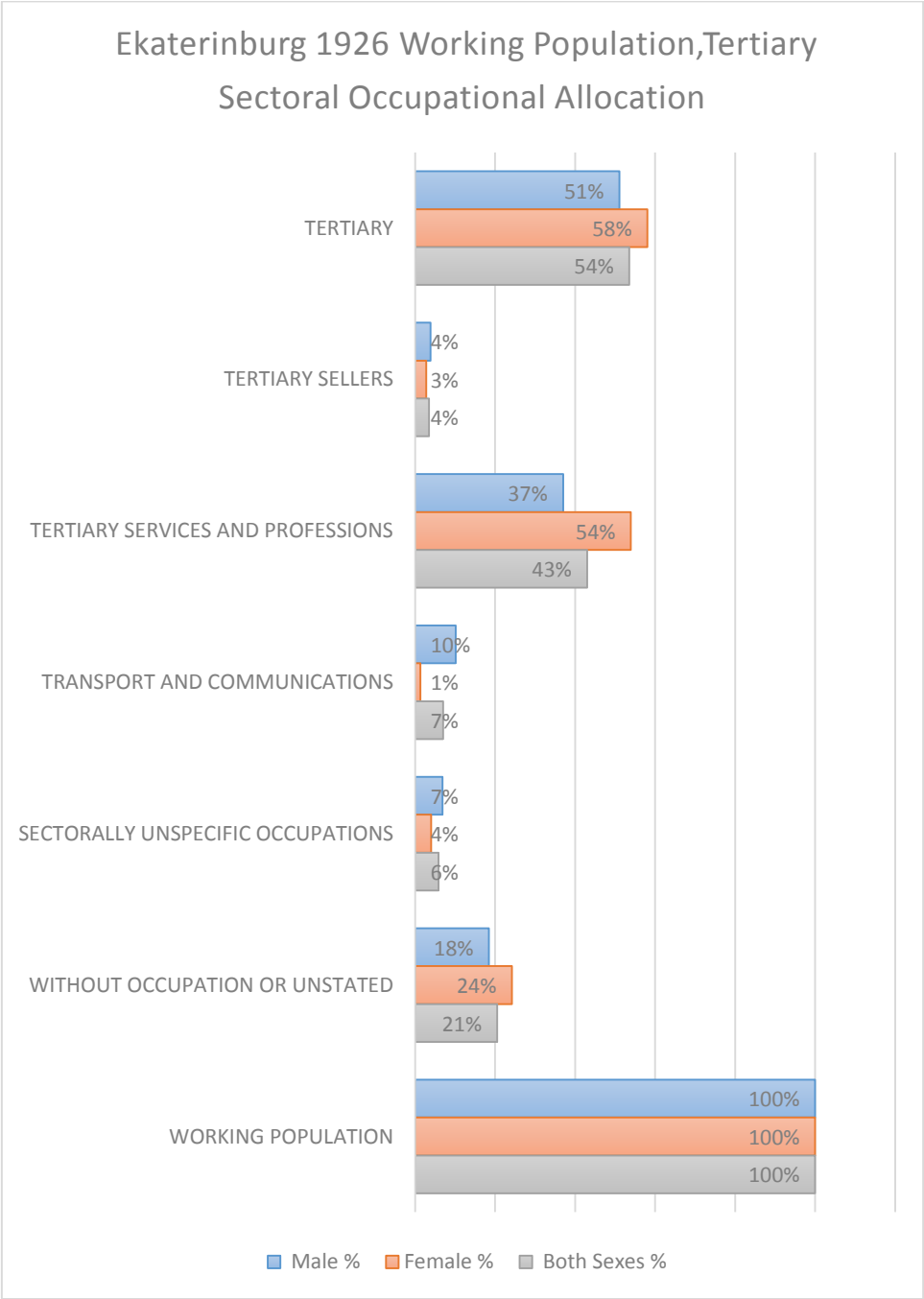


Chart 92- Ekaterinburg 1926 Working Population, Tertiary Sub-sectoral Occupational Allocation

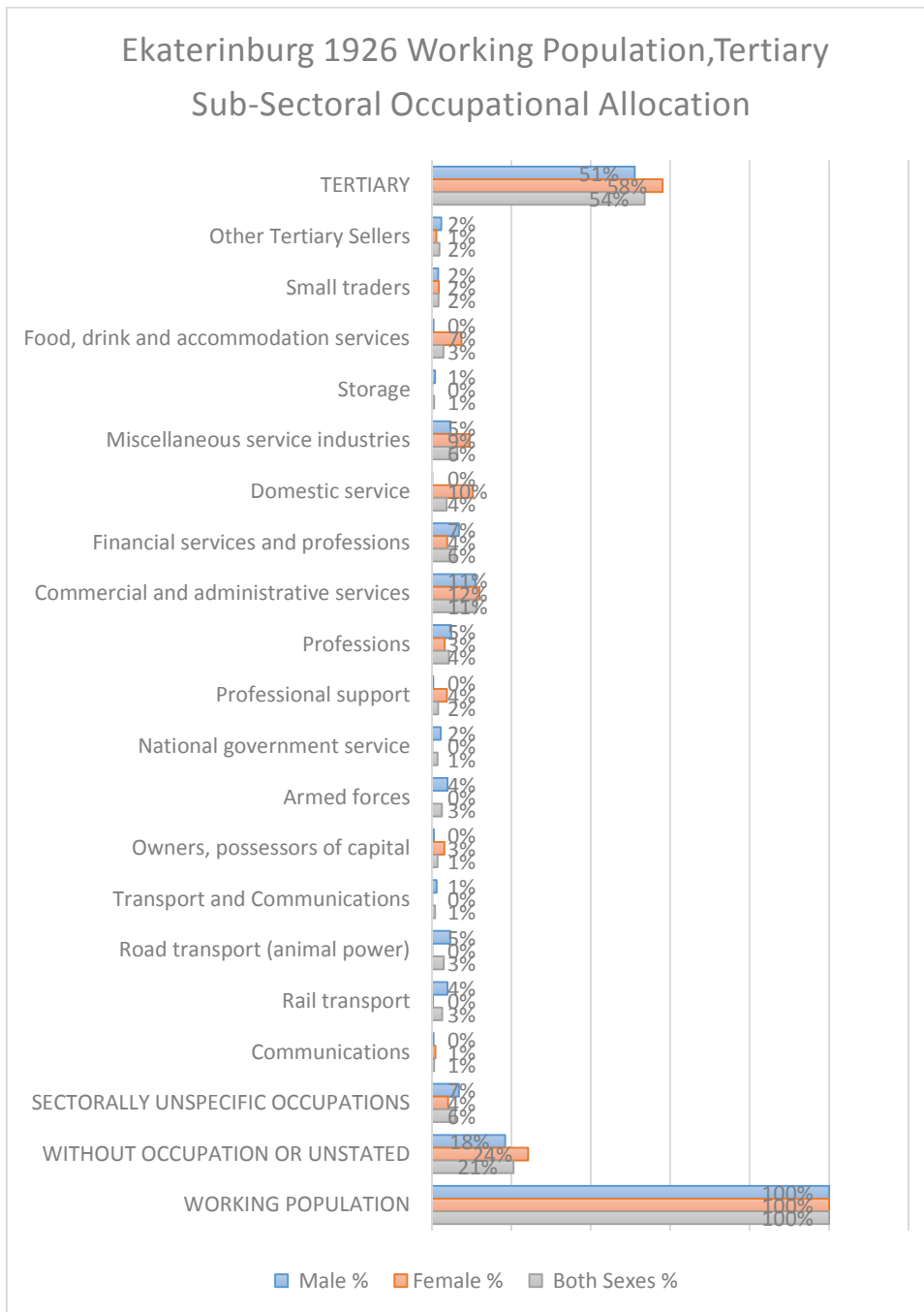


Chart 93-Ekaterinburg 1926 Gender Allocation within Tertiary Occupational Sectors

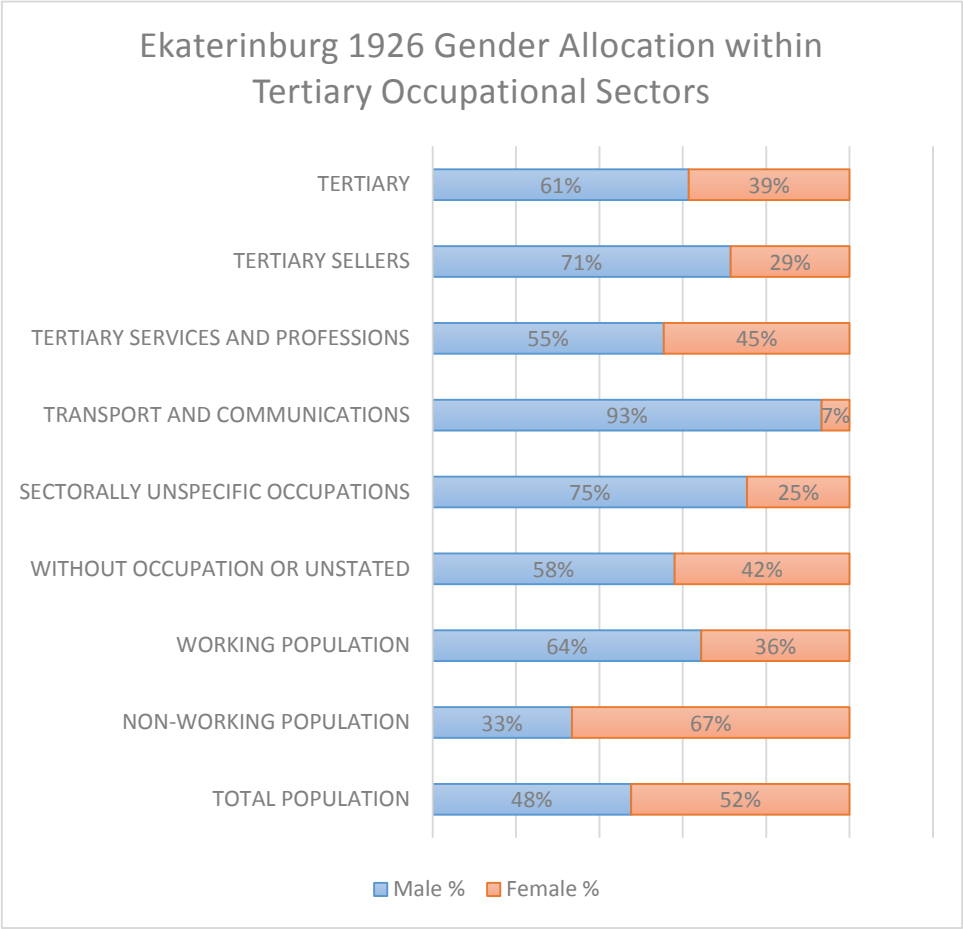
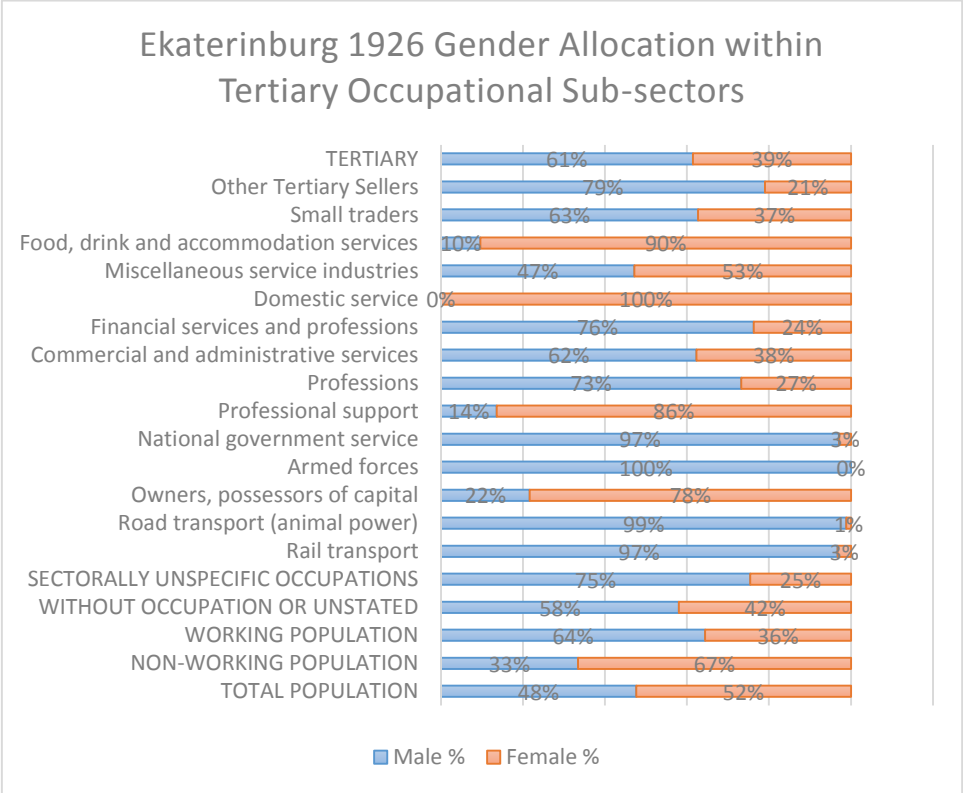


Chart 94 Ekaterinburg 1926 Gender Allocation within Tertiary Occupational Sub-sectors



Summary Ekaterinburg Tertiary Sub-sectoral Occupational Allocation 1926

Coming to 1926, we could observe that 'tertiary services and professions' is the most dominant tertiary sector branch when both sexes combined. Still females are more densely concentrated under this specific tertiary sector branch whereas for males, tertiary dealers-sellers have lost some part of their share to transportation and tertiary sector and professions branches.

When we look at the occupational Sub-sectoral breakdown, we could observe that within 'tertiary series and professions' the allocation among different sub-sectors have changed. Unlike in 1897, domestic service no longer play an extensively significant part when both sexes combined. The high concentration within tertiary services and liberal professions stems from commercial and administrative services as well as financial services and professions where %32 of tertiary sector working population has been classified under this sub-sector. The shares of tertiary dealers and sealers has been trimmed down but miscellaneous services industries soar while liberal professions as well as road and railway transportation keep their prominence.

The gender breakdown of individual sectors indicates us that within tertiary sector, male-female balance has been broken in favour of males. This case is more vivid in local and government services and transportation sub-sectors. However, also within financial services and professions as well as commercial and administrative services, male have the majority. This shows us that among 'white-collar' related activities and relevant occupations as well as liberal professions, male presence have been felt more densely while females remained dominant only in more inferior and less skilful occupations like professional support or miscellaneous service industries.

General Outlook: Ekaterinburg Tertiary Sub-sectoral Occupational Shift between 1897-1926

Chart 95- Ekaterinburg 1897-1926 Total Population, Both Sexes, Tertiary Sectoral Occupational Shift

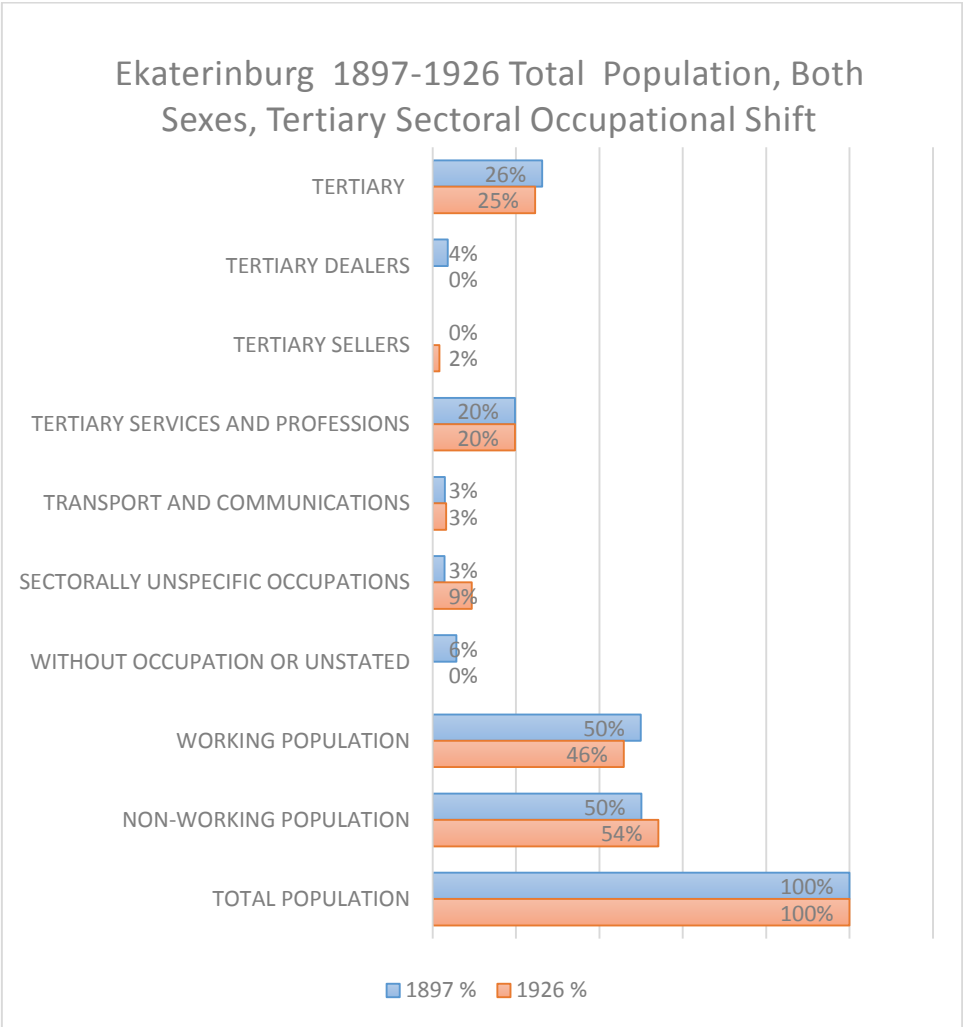


Chart 96-Ekaterinburg 1897-1926 Total Population, Both Sexes, Tertiary Sub-sectoral Occupational Shift

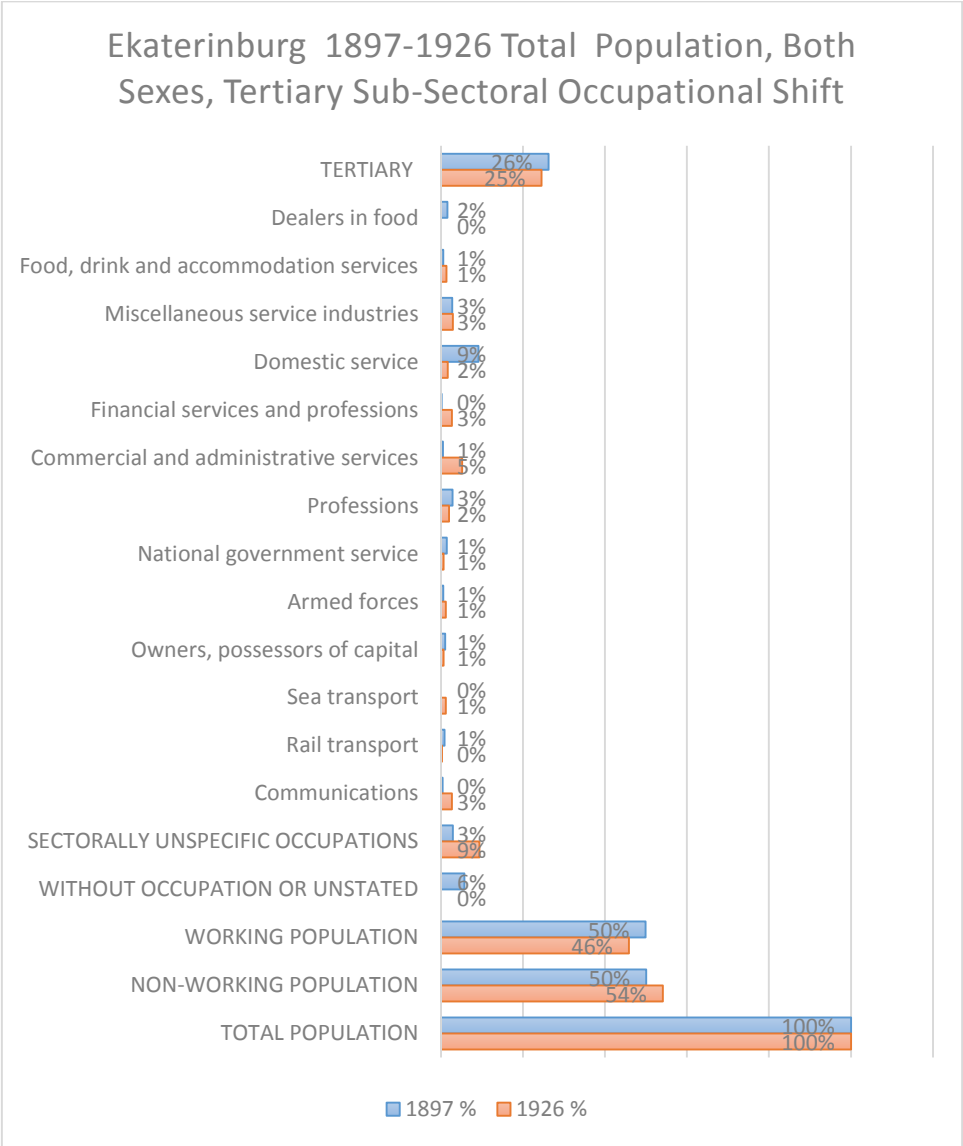


Chart 97- Ekaterinburg 1897-1926 Working Population, Both Sexes, Tertiary Sectoral Occupational Shift

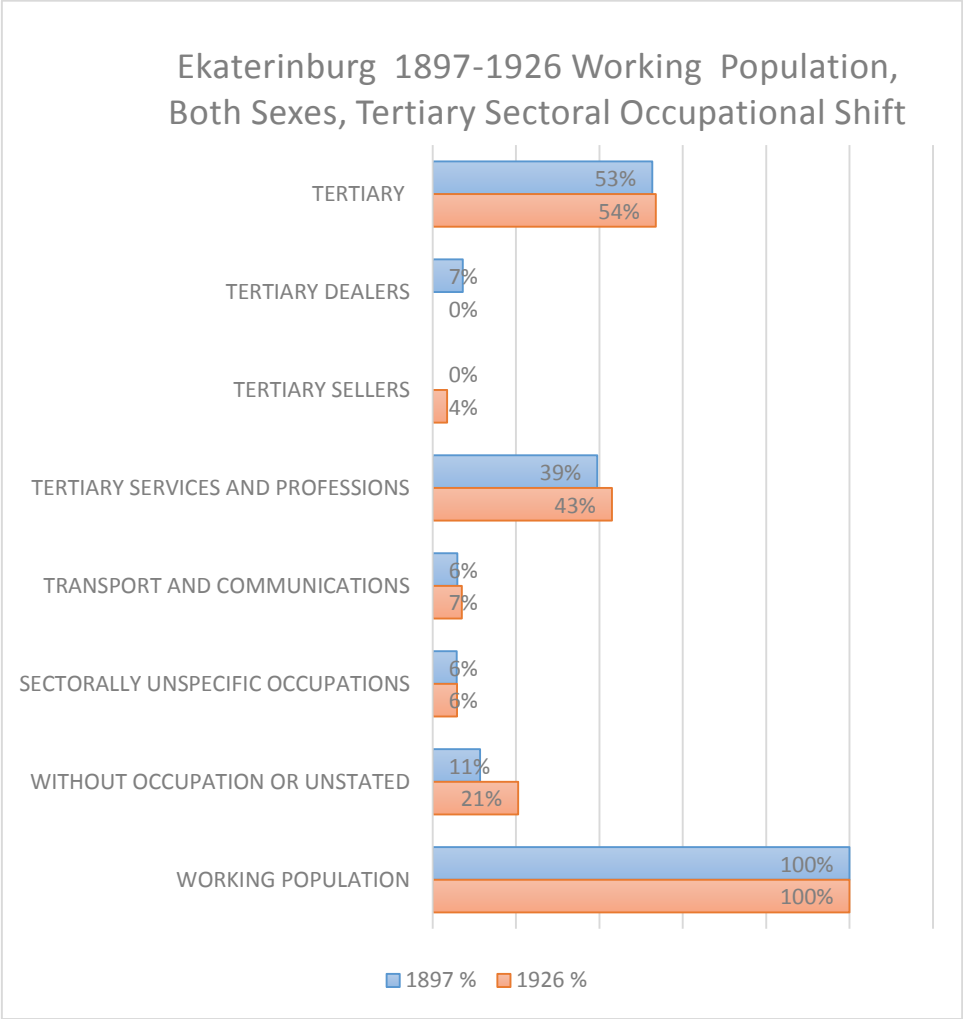


Chart 98- Ekaterinburg 1897-1926 Working Population, Both Sexes, Tertiary Sub-sectoral Occupational Shift

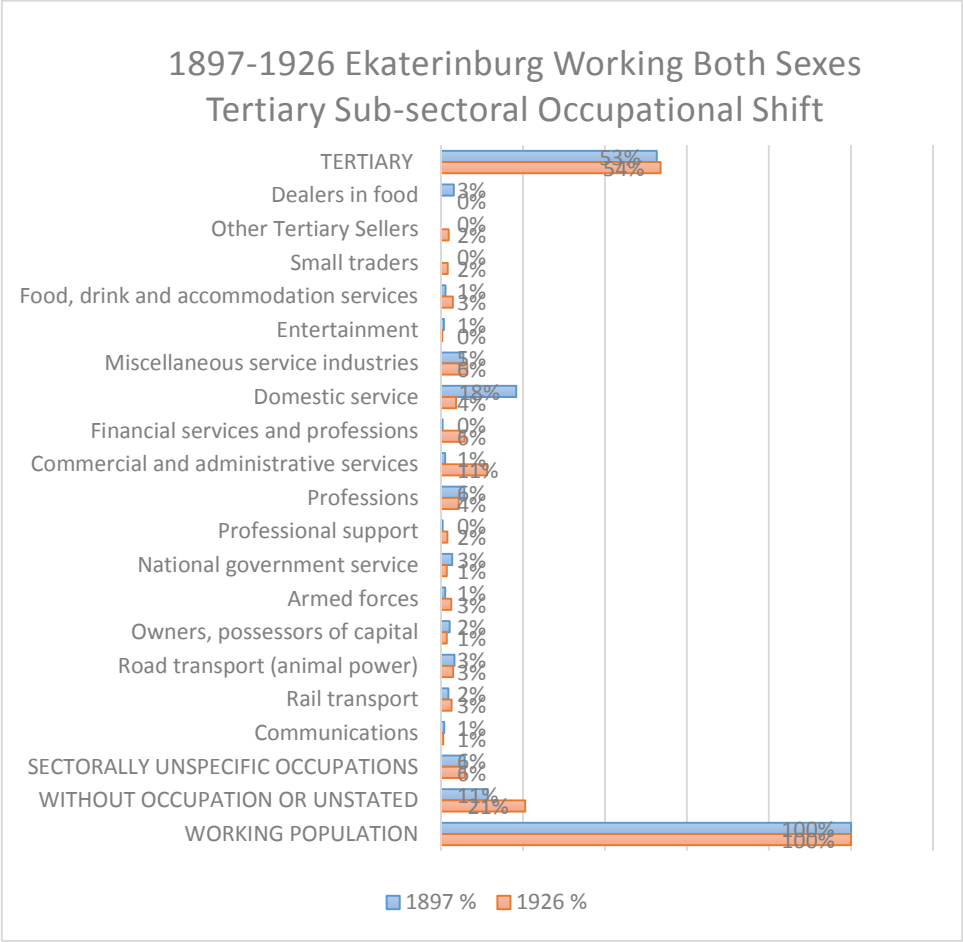


Chart 99- Ekaterinburg 1897-1926 Total Population, Males, Tertiary Sectoral Occupational Shift

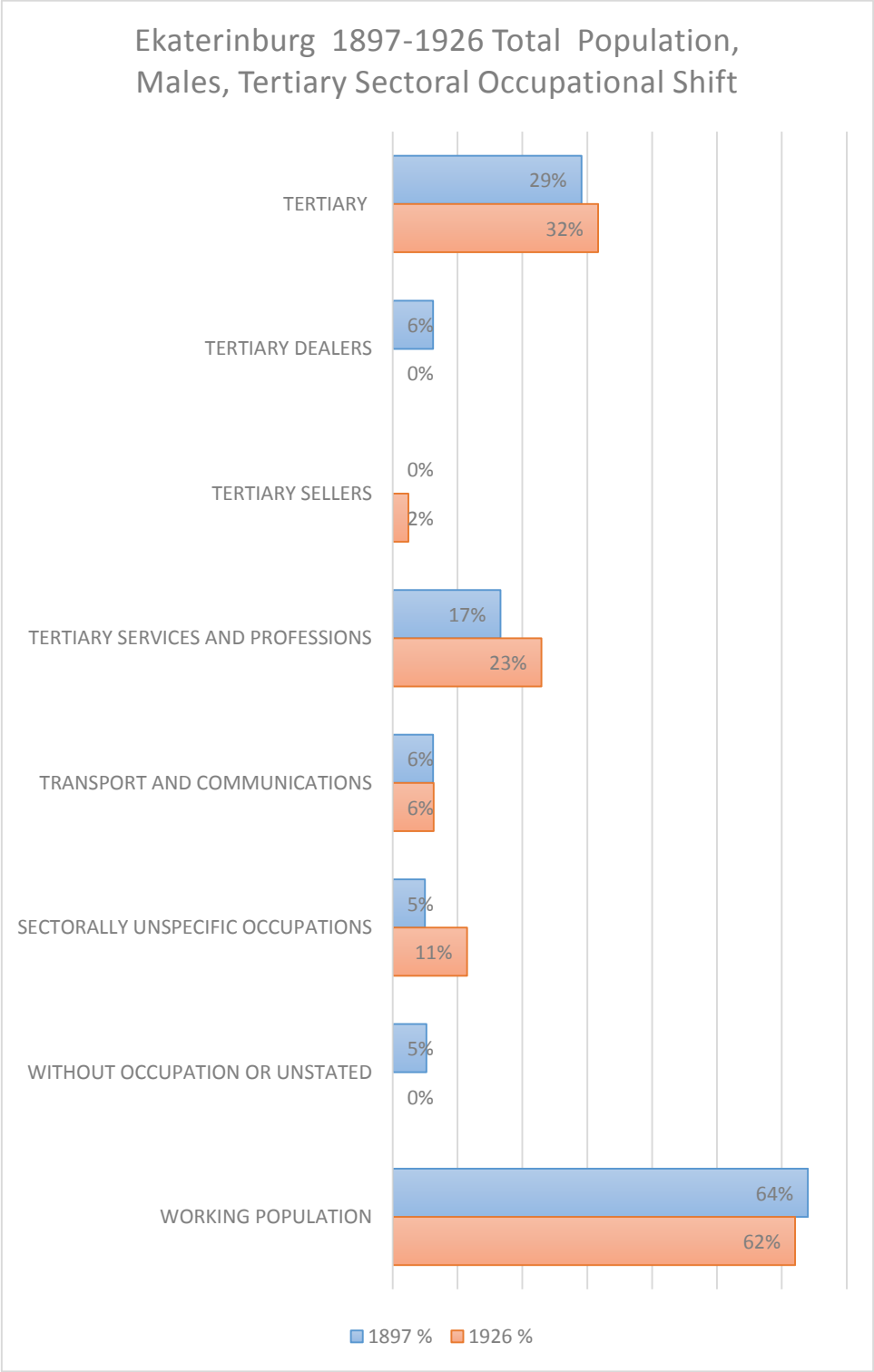


Chart 100- Ekaterinburg 1897-1926 Total Population, Males, Tertiary Sub-sectoral Occupational Shift

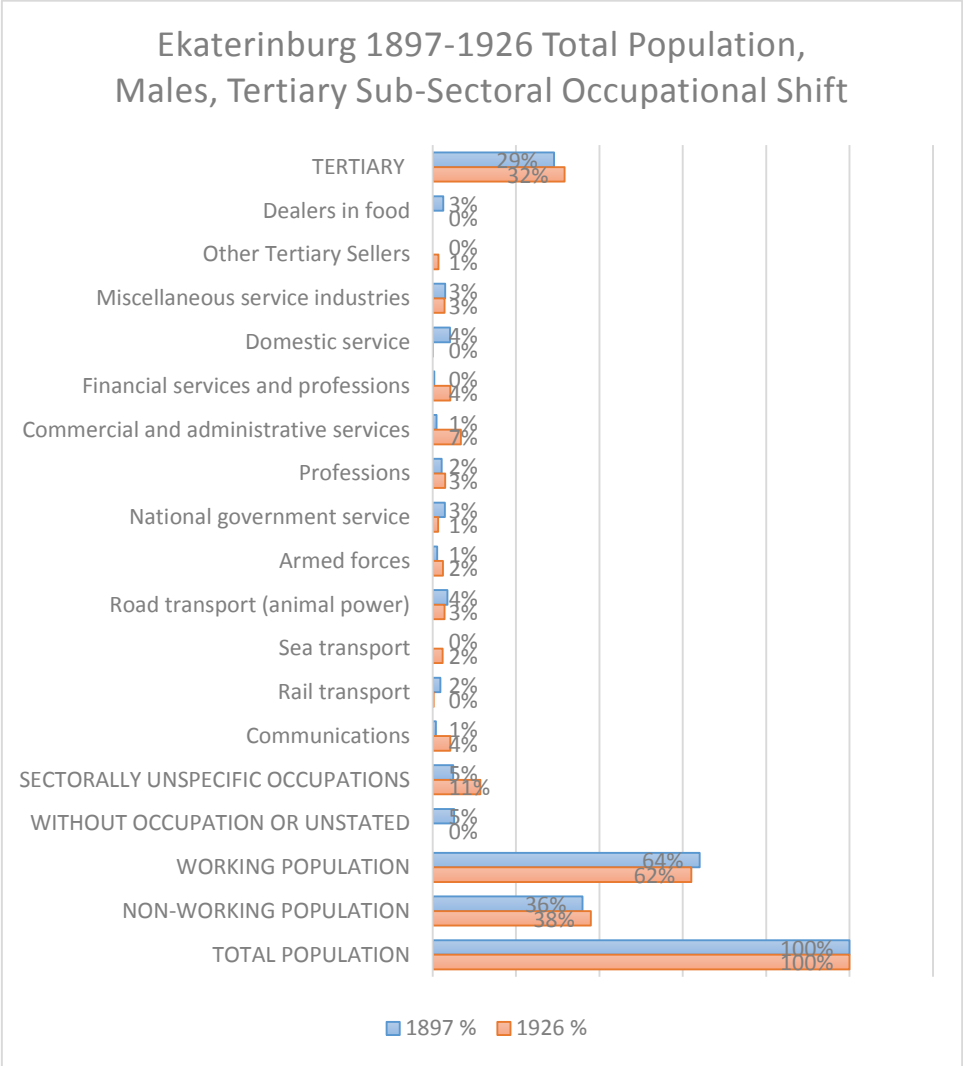


Chart 101-Ekaterinburg 1897-1926 Working Population, Males, Tertiary Sectoral Occupational Shift

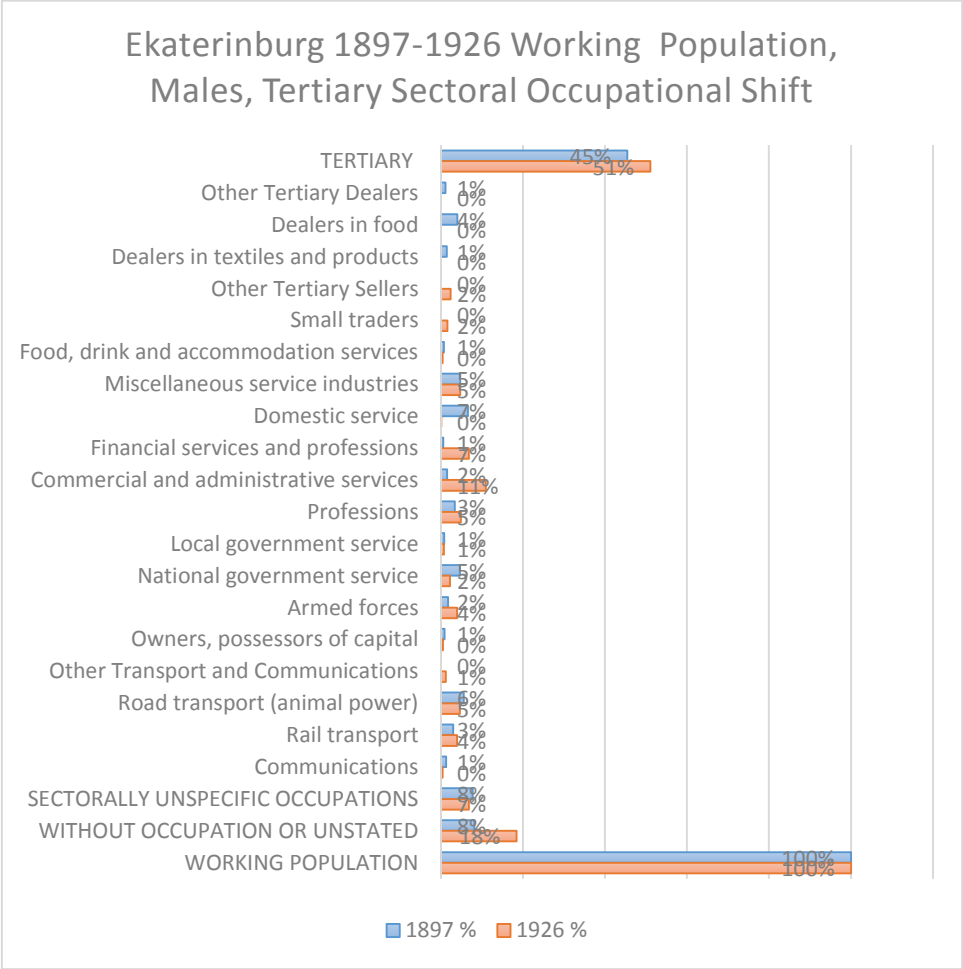


Chart 102- Ekaterinburg 1897-1926 Working Population, Males, Tertiary Sub-sectoral Occupational Shift

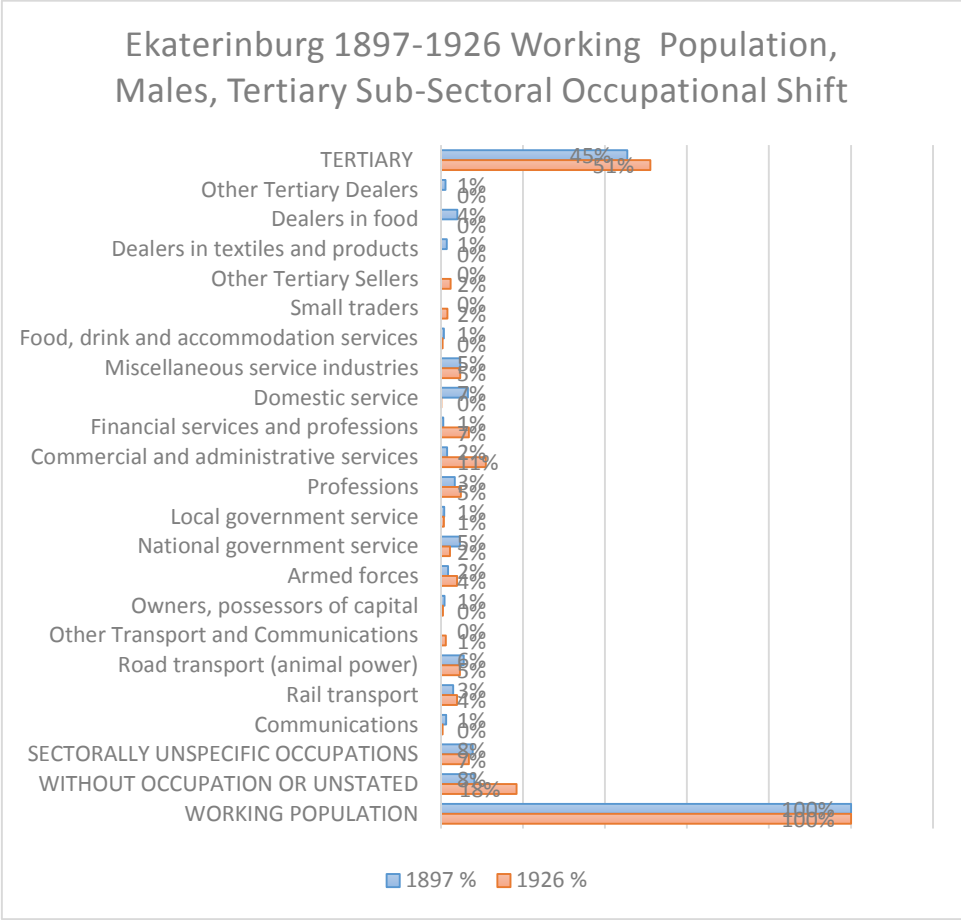


Chart 103-Ekaterinburg 1897-1926 Total Population, Females, Tertiary Sectoral Occupational Shift

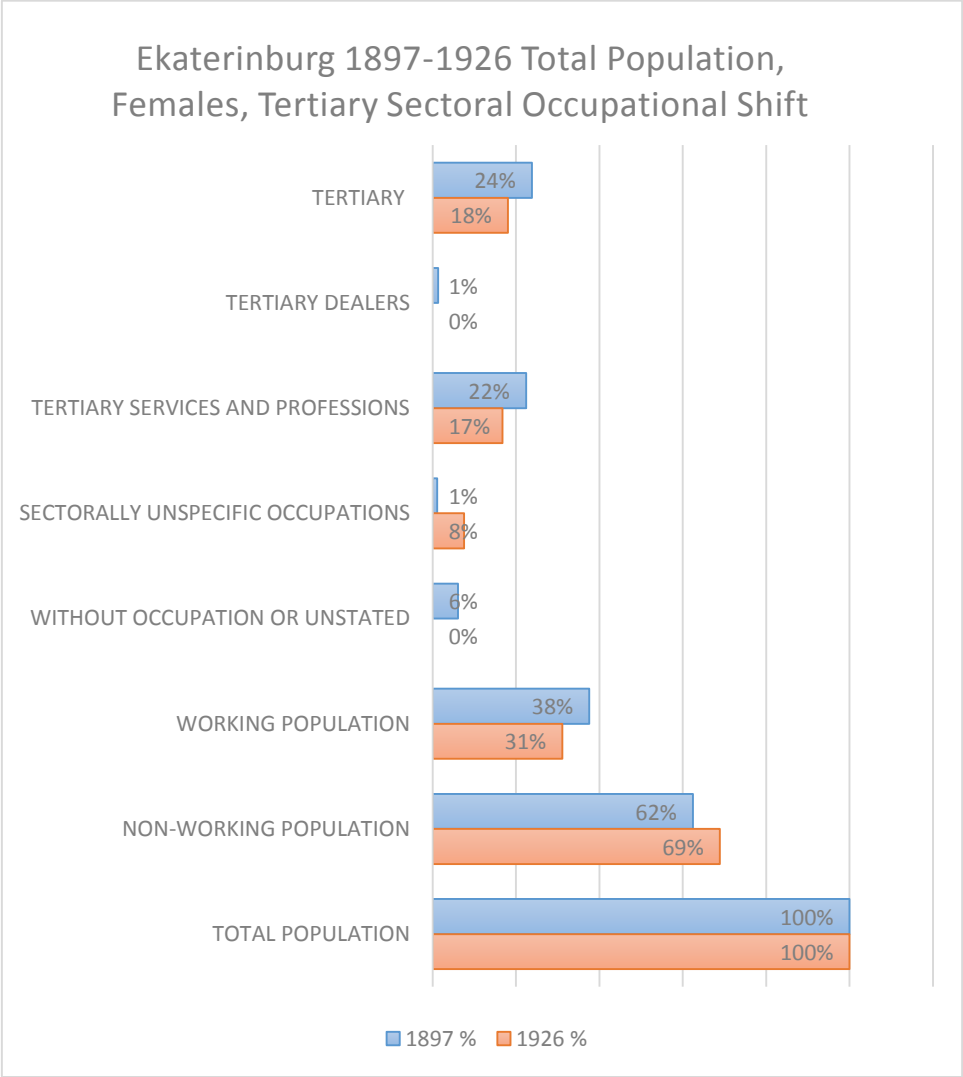


Chart 104- Ekaterinburg 1897-1926 Total Population, Females, Tertiary Sub-sectoral Occupational Shift

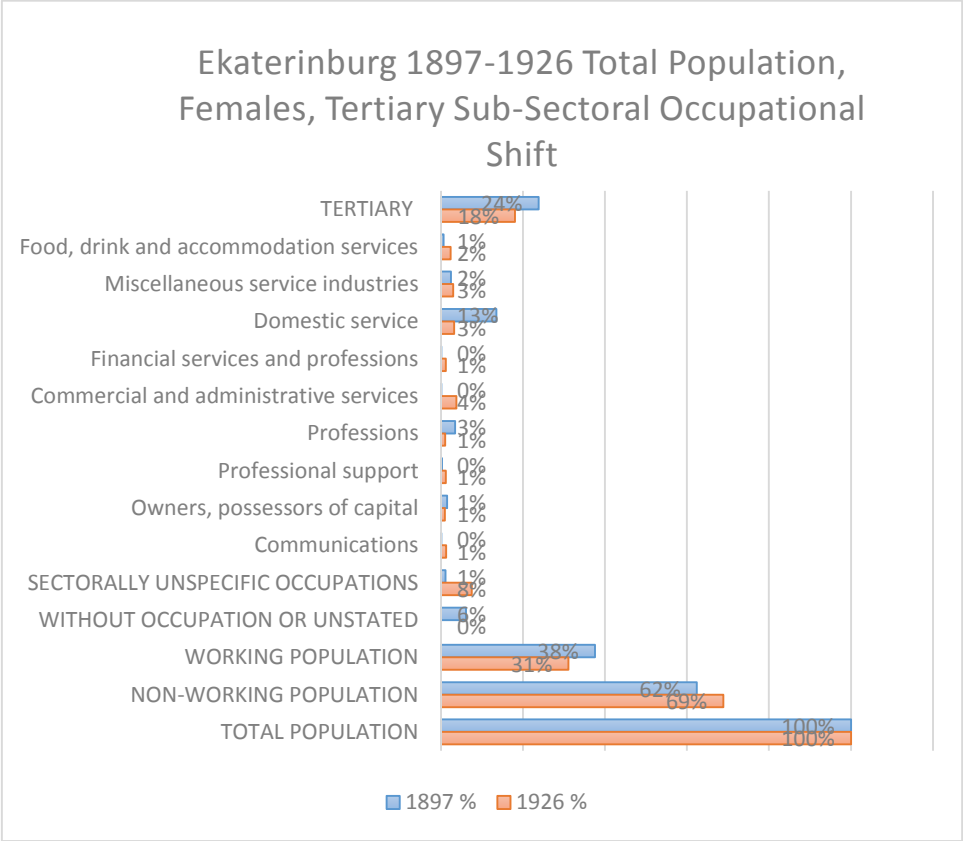


Chart 105- Ekaterinburg 1897-1926 Working Population, Females, Tertiary Sectoral Occupational Shift

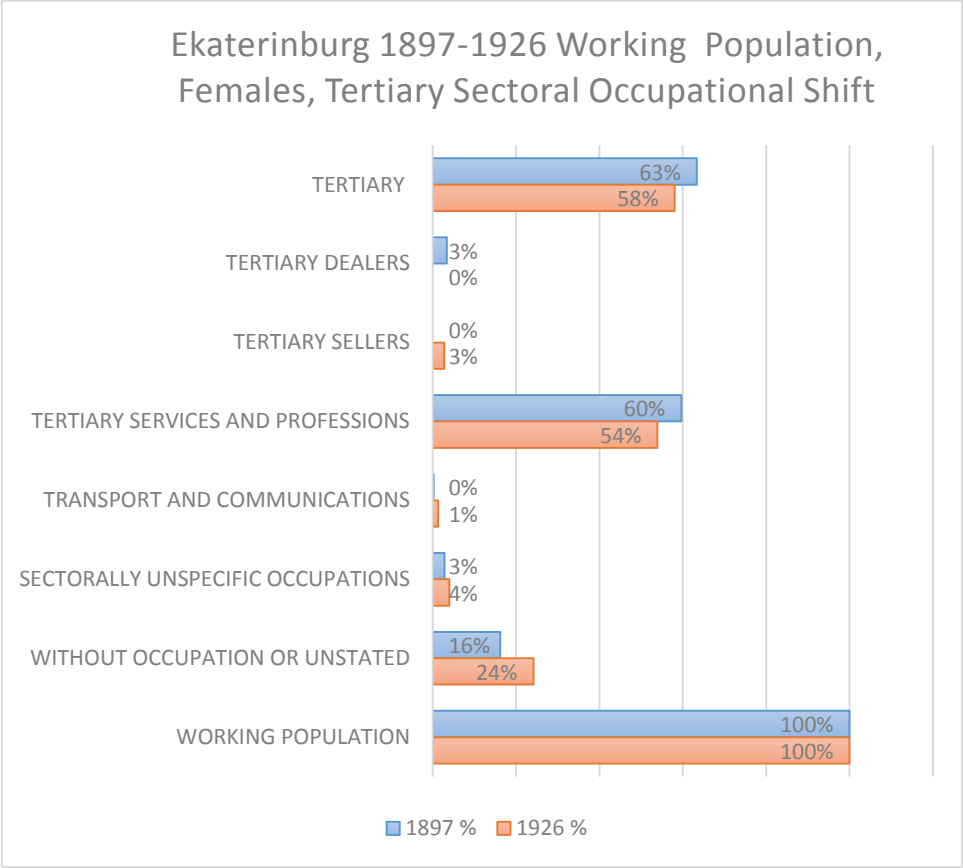
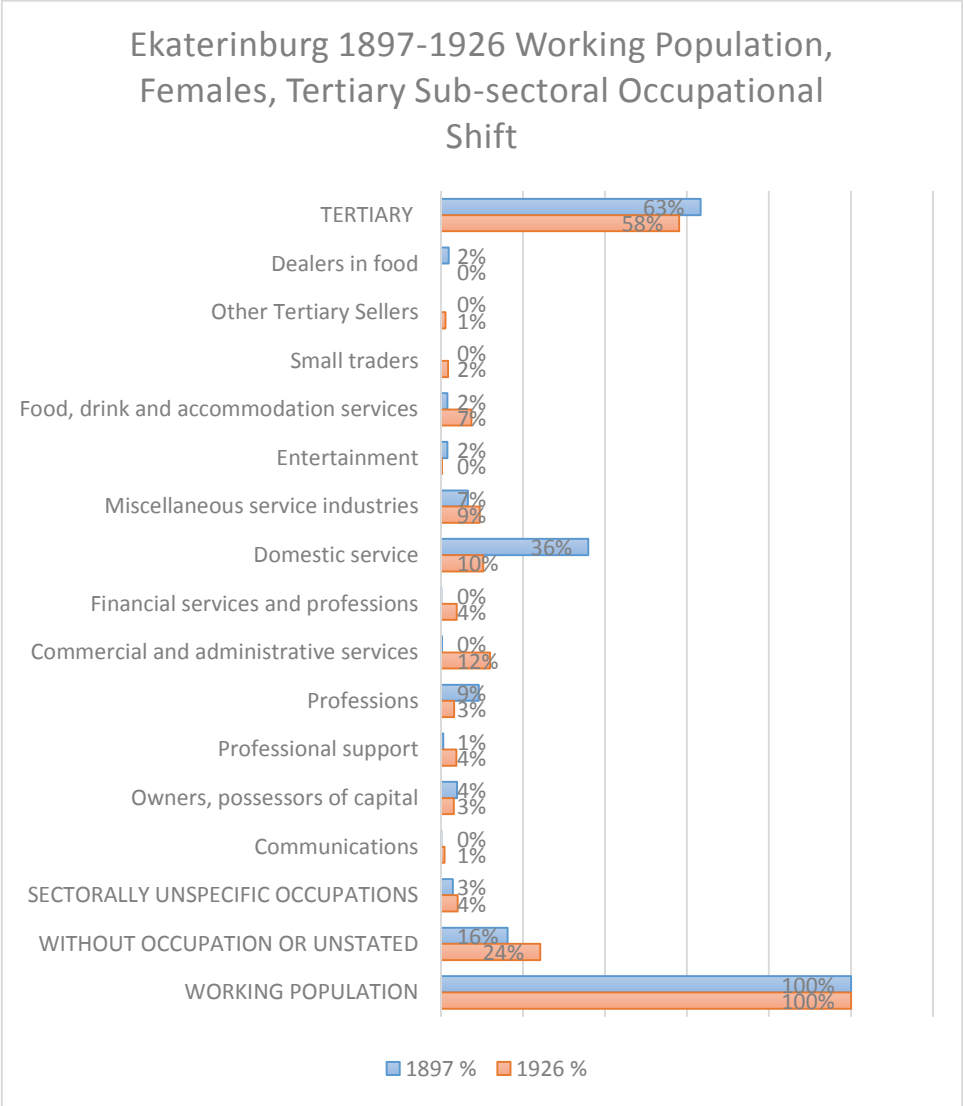


Chart 106- Ekaterinburg 1897-1926 Working Population, Females, Tertiary Sub-sectoral Occupational Shift



Summary 1897-1926 Ekaterinburg Tertiary Sub-sectoral Occupational Allocations

Looking overall change between 1897 and 1926 among tertiary sector occupations, we observe that a decline in the tertiary dealers-sellers share which is reflected into tertiary services and professions and to some extent, transport and communications when both sexes combined.

Looking at Sub-sectoral breakdown regarding tertiary sector occupational transformation in Ekaterinburg between 1897-1926 we observe that domestic services has been replaced by financial services and professions as well as commercial and administrative services. Transportation sub-sectors and liberal professions stand as other prominent sub-sectors whereas a considerable rise in the share of food, drink and accommodation services has been observed.

Regarding males, the margin of decline in the tertiary dealers-sellers sub-sectors between 1897 and 1926 is huge while most of these lost shares were reflected in tertiary services and professions.

The 'white-collar' occupational sub-sectors as financial services and professions and commercial and administrative services stand as a centralized destination for loss of shares from the tertiary sellers and dealers while armed forces also exhibits a rising trend in shares.

Discussion: Occupational Transformation in Ekaterinburg between 1897-1926

Firstly, the low amount of primary sector related occupations catches attention. According to the occupational data indicated in 1897 and 1926 Census records; very few number of persons of working population has an occupation within agricultural sector in 1897. within working population. Coming to 1926, the absolute figures are rising however, the overall weight of the primary sector within Ekaterinburg was further diminished. Meanwhile, Russia, especially the regions towards more eastern parts, like Perm where our city of interest Ekaterinburg located, primary sector activities, especially agriculture had a much more central place in the overall economic activities. Moreover, between 1897 and 1926, especially after Bolshevik Revolution and the Civil War years, up until the end of New Economy Policy period, there was a falling trend that has been established regarding in the share of commercialized agriculture products.

This would mean, less agricultural population were eager to bring the product into the market but instead, they would chose to consume themselves.²¹⁰ This was due to unfavourable terms of trade between food prices and the industrial products in the early years of New Economic Policy, accompanied by an immense ruralisation²¹¹. As a result one would expect, at least a larger primary sector in Ekaterinburg, due to possible connections that town population still has strong connections with their rural lands and agricultural occupations. It goes without saying that Perm, the region where Ekaterinburg was located in, was associated with much more agricultural work and less urbanized region.

²¹⁰Harrison, "From Tsarism to the New Economic Policy," 112.

²¹¹Gijs Kessler, "A Population under Pressure: Household Responses to Demographic and Economic Shock in the Interwar Soviet Union," in *A Dream Deferred: New Studies in Russian and Soviet Labour History*, ed. Donald A. Filtzer, International and Comparative Social History, v. 11 (Bern [Switzerland] ; New York: Peter Lang, 2008), 318.

Despite this, as we know from earlier literature, Ekaterinburg stands as an exceptional city, because of its relatively developed market economy and commercial activity, in contrast with the region that it has been located in. Moreover, not being an officially administratively central unit, Ekaterinburg, as a city had relatively more liberty in its operations which gave the way from a more widened list of economic activities. Ekaterinburg, having a Western look, was an urbanized and following a ‘modern city pattern’ since mid-19th centuries.²¹² Under these circumstances, it would be natural to expect that the city does not contain much persons who has an agricultural occupation, principally. However, this does not have to mean that it was only these %3 of working population were involved in an agricultural production. We know from earlier literature that agricultural activity as well as factory production had a seasonal character and the rural-urban nexus between the city and the rural areas has always been strong.

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Recalling the methodological issues regarding census records, especially 1897, which I have mentioned for Ivanovo analysis, could also be valid for the Ekaterinburg case. The number of persons who has been declared as having an agricultural occupation much depends on the month or season where this study has been taken. Probably, some of these working persons, who has agriculture as their side occupation were not recorded as such. Therefore, one must be cautious about this limited number and share of the population who were recorded as having an

²¹²Tulisov, *Ekaterinburg*, 74.

²¹³Gijs Kessler, “The Rural–Urban Nexus in Russian Labour History, 1860s–1930s: Suggestions for a Global, Comparative Perspective,” in *Labour Matters: Towards Global Histories: Studies in Honour of Sabyasachi Bhattacharya*, ed. Marcel van der Linden and P. Mohapatra Prahbu (New Delhi: Tulika Books, 2009), 216.

agricultural occupation.²¹⁴ That is to say, methodological issues regarding the census records, probably comes up as an explaining factor.

As a second issue, interestingly, despite the region Perm has been known as a core area for metallurgical production historically and meanwhile, Ekaterinburg has been known as a ‘mining city’ since the beginning of 19th century, the secondary sector has no particular importance regarding occupational allocation of the city of Ekaterinburg . There is only a partial concentration in ‘related’ industries; like ‘machine building’ or ‘iron and steel works’ but not any single PSTI secondary sub-sector would signify serious industrial activity within the city. Regarding our purposes in this thesis project; that is; on the way to problematize industrialization what would this imply?

As I have mentioned in the first Chapter, the industrialization conception has been subjected to change and the ‘typical-Western-stereotype’ industrialization conception has been challenged²¹⁵. At this point, one should recall from Thomas Smith with his contribution on the ‘rural industrialization’ as an alternative path: industrialization does not have to be an urban process. This one feature, actually separates Ekaterinburg from Ivanovo. Due to historical reasons that we have mentioned above in the ‘General Facts’ part of this subsection, the centre of heavy industrial production were accumulated not within but on the peripheral rural places

²¹⁴Ralph S. Clem, ed., *Research Guide to the Russian and Soviet Censuses*, Studies in Soviet History and Society (Ithaca, N.Y.) (Ithaca: Cornell University Press, 1986), 101.

²¹⁵ Smith, “Pre-Modern Economic Growth”; Saito, “Proto-Industrialization and Labour-Intensive Industrialization: reflections on Smithian Growth and the Role of Skill Intensity”; Akira Hayami, *Japan’s Industrious Revolution: Economic and Social Transformations in the Early Modern Period*, Studies in Economic History (Tokyo: Springer, 2015); Kaoru Sugihara, “Labour-Intensive Industrialization in Global History: an Interpretation of East Asian Experiences,” in *Labour-Intensive Industrialization in Global History*, ed. Gareth Austin and Kaoru Sugihara, Routledge Explorations in Economic History 59 (Abingdon, Oxon ; New York: Routledge, 2013), 20–65.

around the city of Ekaterinburg.²¹⁶ Unlike Ivanovo, the city industry was not based on secondary sector occupations and related activities but a tertiary sector and a ‘supportive’ secondary sector that has been built around the ‘core industrial area’ located in the periphery.

Instead of being directly the centre of production and hence, having a large secondary sector related activities, Ekaterinburg was more like a commercial and administrative hub; and its role could be reckoned as fulfilling a kind of policing mechanism between different parts of the Ural mining production process. The factories and workshops were not only related with mining industry directly but there were support industries that have been established through the mid-19th century. Sabalkin’s initiative, for instance, whose machine-building factory initiative was founded in 1839, managed to process 35 years.²¹⁷ We observe that these ‘side or support industries’ made the core of the secondary sector in the city of Ekaterinburg, especially among males.

According to the earlier literature, the number of these ‘heavy-industry’ related industries should have risen to prominence especially during the war years, starting from 1910 to 1920. Tulisov notes that when the Bolsheviks finally claim their power in the city after the execution of Nicholas II who was himself moved to Ekaterinburg with his family after the February Revolution, the city population has been decreased to 90,000 but despite that heavy-industry related activities were intensified.²¹⁸

²¹⁶Tulisov, *Ekaterinburg*, 153.

²¹⁷Korepanov and Blinov, *Gorod Posredine Rossii*, 26.

²¹⁸Tulisov, *Ekaterinburg*, 157.

The results obtained from our analysis does not confirm this view, at least regarding the city centre. In fact, between 1897 and 1926, despite total population has increased in a considerably fast rate, heavy-industry related occupations does not come into prominence. Perhaps, what Tulisov has been mentioned about, was still not in the central part of the city but instead, some peripheral parts, in the districts of the centre. Nevertheless, it would be wrong to conclude that neither First World War nor Bolshevik Revolution had a significant impact on the city industrial basis, according to the figures related to secondary sector Sub-sectoral allocation obtained from our analysis.

As a third aspect regarding the occupational structure in the city of Ekaterinburg, I would like to mention about the large tertiary sector which keeps its dominance among the occupational sectors. It is true that despite the similarity of the shares of tertiary sector occupations in both 1897 and 1926, the tertiary Sub-sectoral composition is quite different than each other. Formerly, this tertiary sector basis was mainly on the male and female domestic servants. However, our results indicate that tertiary dealers were also existent in 1897, which could be taken as a clue that Ekaterinburg was a commercially lively city, despite not being at the heart of an industrial production. According to Mamin-Sibiriak, the commercial background of the city was dating back to mid-19th in 1860, where a strong merchant class was claimed to be existent. Mamin Sibiriak build his claim on his findings that there were various guilds for different levels of hierarchical honour level and meanwhile, there were 520 shops in the city along with 30 factories and workshops, recorded.²¹⁹This historical tendency was supported by continues investments into city's transportation capabilities. In 1886, Ural Mining Railways has been prolonged until Tyumen. This enhanced transportation capability will prove right and will

²¹⁹ Mamin-Sibiriak, Minenko, and Shkerin, "Gorod Ekaterinburg (1889)."

provide very important features on Ekaterinburg economy. By the help of improving transportation features, Ekaterinburg became the centre of Urals region, with a similar process with which Moscow became a centre in European Russia, Ekaterinburg would become such a centre in Urals'.²²⁰

We also know that there were structural differences between the tertiary sector in 1897 and tertiary sector in 1926. The immense importance of domestic service has been diminished when we come to 1926 and meanwhile, white-collar related office occupations as well as occupations relating to governmental institutions has become more common. This is widely valid for males while females, getting larger in total population, becoming less inclined to have an occupation; most of the newly joined female population to the city, either becomes non-working person or 'without occupation' title.

The rise in the amount of administrative and governmental institutions related occupations could be direct result of the Bolshevik takeover, since it was followed by an enhancement in the administrative role of Ekaterinburg. However, how the city did has maintained such a high tertiary sector share while the secondary sector activities were so limited is a legitimate question to ask here.

²²⁰ Korepanov and Blinov, *Gorod Posredine Rossii*, 94–95.

If we follow through the relevant literature regarding the developments regarding the city economy, we would notice the enhanced transportation possibilities, especially during last twenty years of the 19th century. In 1886, Ural Mining Railways has been prolonged until Tyumen. This move would be crucial in order to keep the city economy alive and its position as a transmitter between the outputs produced in Eastern Siberia and Western Europe. By the help of improving transportation features, Ekaterinburg became the centre of Urals region, with a similar process with which Moscow became a centre in European Russia, Ekaterinburg would become such a centre in Urals? ²²¹

Verdict: Occupational Transformation in Ekaterinburg: 1897-1926

The city of Ekaterinburg, being in the centre of an industrial region had a male dominated total and working population structure and labour force participation could not be deemed as high, especially among females. The occupational structure of Ekaterinburg was mainly based on tertiary sector occupations; in particular, domestic service occupations for females while tertiary dealers as well as transport and communication for males.

Despite having such a tertiary sector oriented occupational structure Ekaterinburg did not have a high secondary or primary sector in occupational shares. This might be stemming from the fact that industrial basis was not located in the city itself but instead, the productive activities were held on the peripheral regions of the city.

²²¹Ibid.

Between 1897 and 1926, we could not track an inter-sectoral occupational transformation which means there is no migration from secondary or primary sector to tertiary sector. Instead, the Sub-sectoral occupational allocation within each sector has been transformed. Instead of domestic servants sub-sector, which was making up the majority of the tertiary sector shares in 1897, tertiary sector Sub-sectoral allocation in 1926 shows that local and national governmental institutions led a newly formed tertiary sector-oriented occupational structure. Within this newly formed structure, main role was played by males while females was disappearing from the workplace despite aggravating on their earlier dominance in the total population.

Results showed us that historical proximity of Ekaterinburg to industrial regions did not let the city show 'Western type' industrialization patterns (i.e. high male/female rate or high rate of secondary sector share releasing to tertiary sector in time) but instead, a high tertiary sector share has already been formed in 1897. This could indicate that the city population formed the occupational structure according to the needs of nearby regions while the city itself could not follow the 'industrialization proper' path. Once the transportation enhancements was brought to the picture during last quarter of 19th century, the geographical peculiarity of the city led its tertiary sector grow even further while primary and secondary sectors stay limited in occupational share. 'War effect' which was supposed to boom 'heavy industry' related activities does not appear to create a boom in the secondary sector activities. Only after Bolshevik takeover, the newly formed government has given an enhanced role to the city of Ekaterinburg which has led to a new tertiary sector structural allocation where local or national government institutions related white-collar service industry shares, especially among the males has increased.

Therefore, it would be a reasonable suggestion that high tertiary sector inclination of the city of Ekaterinburg was stemming from different reasons; in 1897, it was the transportation opportunities combined with geographical peculiarity of the city and in 1926, it was mainly government led administrative measures.

Chapter IV. Occupational Transformation and Industrialization from Late Ottoman Empire towards early Turkish Republican Era.

Introduction

In Chapter III, our aim would be to provide a general account of industrialization/occupational structure relation during the late Ottoman/early Turkish Republican era, roughly covering between mid-19th and 20th centuries. The main question in our mind is the same: what kind of an industrialization path did Ottomans and later on, Republican Turkey have followed throughout a hundred years' period, between 1845 and 1945; how does it associate with the occupational transformation? This could be a well-studied area of inquiry and could seem to be a long period to work on; but we made our choices regarding period and context according to the following reasons.

First, Ottoman and Turkish economic history has generally been rendered by a discrete periodization mentality. This was mainly, from the ideologically driven, political or administrative point of view instead of an economic point of view. According to the former type, the studies were based on periods with distinct concrete points, separated from each other by generally political events or developments. Our attempted analysis could contribute on the recently revitalized literature, from this point: by working on a more continuous and integrative mind setting, which would be a rare attempt, we could have a deeper understanding of

industrialization experience as a whole, throughout a hundred years of Ottoman and Republican Turkey. If we recall from Charles Tilly,

*“Nineteenth-century Europe's great shift in organization.... Understanding those changes and their consequences is our most pressing reason for undertaking the systematic study of big structures and large processes .We must look at them comparatively over substantial blocks of space and time, in order to see whence we have come, where we are going, and what real alternatives to our present condition exist. Systematic comparison of structures and processes will not only place our own situation in perspective, but also help in the identification of causes and effects.”*²²²

The second reason is from the aspect of methodology. Previously, the relevant changes and transformation in the structures of society has been tracked via macroeconomic indicators as GDP or terms of trade, sectoral outputs of factor productivity rates but a special focus on occupational transformation per se is rare and would need further elaboration. In this thesis project, instead, we would like to undertake the task with a more quantitative methodology and relevant toolbox; that is, by working on occupational transformation through the census records and tax registers via PSTI as a way to establish a dialogue between them.

Thirdly, both Ottoman Empire and Turkish Republican industrialization experiences were taken in a national or sometimes, at most, regional level. Studies which were exclusively focusing on

²²²Charles Tilly, *Big Structures, Large Processes, Huge Comparisons*, Russell Sage Foundation 75th Anniversary Series (New York: Russell Sage Foundation, 1984), 10–11.

cities were rare. Our study brings two cities into spotlight, not for a raw comparison but as two examples of different experiences: While Bursa was a partly urbanized traditional Ottoman city which was known for its raw silk production and exports, Ankara was turned into a city, from being a town, largely due to reasons not primarily associated with economic importance. It would be important to track the occupational change within these two cities and compare it with the existing literature on Ottoman industrialization experience. Before we start to share the results of our analysis, we need elaborate more on some critical themes on the existing literature on Ottoman and Turkish industrialization.

Ottoman Industrialization: A Collapsed Case?

Regarding the Ottoman as well as Turkish Republic industrialization historiography, two crucial elements sets the tone: ‘de-industrialization’ and ‘etatism’. The former term was largely used in the context of the time period between mid-19th century to early 20th Ottoman economic history to explain its ‘failure’ on the way of industrialization while the latter has been devised to pinpoint a change in the mind-set of the Turkish governing agenda on economic matters which remained almost unaltered and more or less, had a liberal tone between 1820 to 1914 starting with 1930s. These two notions, de-industrialization and etatism however, were inherently linked once we think about the whole literature on Ottoman and Turkish Republican industrialization history.

From the mid-19th century on, this was when the first wave of worldwide globalization was accelerated around 1848²²³, Ottoman Empire was in a need to adapt itself into the changing

²²³E. J. Hobsbawm, *The Age of Capital, 1848-1875*, History of Civilization (New York: Scribner, 1975), chap. 2.

global economic conditions and modernize its economy in order to place itself in the industrialization path. There have been many attempts particularly during the Tanzimat period in order to build a modern industrial economy, albeit small in scale, to adapt the new rules of world capitalist order and economic conditions that it has imposed on Ottoman Empire.²²⁴ During 1840 and 1850s, the Sublime Porte had an intention improve the product quality as well as variability via imported technology from Europe. Among various parts of the city, there emerged cotton textile factories, arsenals, or iron forging workshops around the docks.²²⁵ However, Şevket Pamuk reiterates the claim of Edward Clark, not many of these new technologies proved to be successfully implemented for long; and the positive economic impacts have stayed limited. The attempts to break into ‘industrialization train’ became in vain.²²⁶ Therefore, according to the mainstream literature, at the end of 19th century, Ottoman manufacturing industry, which could be taken as a good indicator of being ‘industrialized’²²⁷, could not avoid a total collapse.

It has been generally accepted that behind this failure, ‘de-industrialization’ was playing the main role. In other words, it has been suggested that it was the external dynamics and the ultimate exposure of Ottoman Empire towards worldwide extension of globalization during the first half of the 19th century that turned Ottomans into a peripheral or perhaps, semi-peripheral country, which has been given the role, nothing more than a raw material provider for the centre and manufactured goods importer.²²⁸

²²⁴Edward C. Clark, “The Ottoman Industrial Revolution,” *International Journal of Middle East Studies* 5, no. 01 (1974): 66–72.

²²⁵Şevket Pamuk, *Türkiye’nin 200 Yıllık İktisadi Tarihi: Büyüme, Kurumlar ve Bölüşüm*, 1. Basım: Ocak 2014, Genel Yayın: 2910. Tarih (İstanbul: Türkiye İş Bankası Kültür Yayınları, 2014), 92.

²²⁶ Ibid. 93.

²²⁷İlhan Tekeli, *Sanayi Toplumu İçin Sanayi Yazıları*, Toplu Eserler 11 (İstanbul: Tarih Vakfı, 2010), 233.

²²⁸Rifat Önsoy, *Tanzimat Dönemi Osmanlı Sanayii ve Sanayileşme Politikası*, Ekonomi Dizisi, genel yayın no. 291. no. 22 (Turkey: Türkiye İş Bankası Kültür Yayınları, 1988), 7–25.

Deindustrialization, we should note that the term, could be hardly spoken as an exclusive concept which was developed the 19th century only Ottoman economic history. In a wider perspective, deindustrialization or ‘Dutch Disease’ terms were devised and used by various scholars from very different backgrounds in order to give an account for the uneven development between different parts of the world in terms of various aspects²²⁹ or alternatively, the underdevelopment of the third world²³⁰. According to David Clingingsmith and Jeffrey Williamson, deindustrialization means ‘*the movement of labour out of manufacturing and in to agriculture, either measured in absolute numbers (weak de-industrialization), or as a share of total employment (strong de-industrialization)*’²³¹. Deindustrialization is a theory which also presumes a relationship between terms of trade and industrialization and there have been also some claims about on when it has actually started. For Williamson, the roots of this process which was actually resulted by the great divergence, actually started almost a hundred years before 1870; not later.²³²

²²⁹Şevket Pamuk provides a wide source of earlier studies which takes de-industrialization issue as a central focus: Pamuk, *Türkiye'nin 200 Yıllık İktisadi Tarihi*; Daniel Thorner, “‘De-Industrialisation’ in India, 1881-1931,” in *1st International Conference of Economic History = Ire Conférence Internationale D’histoire économique: Stockholm, Août 1960 : Contributions, Communications.*, ed. International Conference of Economic History (Paris [etc.]: Mouton, 1960), 217–26; Charles Philip Issawi, ed., *The Economic History of the Middle East, 1800-1914: A Book of Readings* (Chicago: University of Chicago Press, 1966); Stephen A. Resnick, “The Decline of Rural Industry Under Export Expansion: A Comparison among Burma, Philippines, and Thailand, 1870–1938,” *The Journal of Economic History* 30 (March 1970): 51–73; Albert Feuerwerker, “Handicraft and Manufactured Cotton Textiles in China, 1871-1910,” *The Journal of Economic History* 30, no. 2 (1970): 338–78.

²³⁰Andre Gunder Frank, *The Development of Underdevelopment* (Boston: New England Free Press, 1966).

²³¹David Clingingsmith and Jeffrey G. Williamson, “Deindustrialization in 18th and 19th Century India: Mughal Decline, Climate Shocks and British Industrial Ascent,” *Explorations in Economic History* 45, no. 3 (2008): 210.

²³²Jeffrey G. Williamson, “Globalization and the Great Divergence: Terms of Trade Booms, Volatility and the Poor Periphery, 1782–1913,” *European Review of Economic History* 12, no. 3 (December 1, 2008): 355–91.

Williamson, however, in a later research, would elaborate ‘de-industrialization’ concept in different local contexts. For instance, regarding India, he and his colleague David Clingingsmith would come to conclusion that partly and especially between mid-18th and 19th centuries, it was the locally induced supply conditions which were playing a central role in the de-industrialization in India, not the external conditions would led them lose their monopoly on cotton manufacturing.²³³

Regarding Ottoman case, in very general lines, the deindustrialization has been accepted as valid argument for the decline of manufacturing industry. Traditional local industry, which was still working on older technological, mainly based on labour-intensive methods, artisanal production and handicrafts was in no position to protect itself from external products which were way to cheaper and having better quality compared to Ottoman counterparts, thanks to the introduction of technology into the production process.

Generally, it has been assumed that it was the Anglo-Ottoman Trade Treaty of 1838 (Baltalimanı Treaty) that could be held as responsible for Dutch Disease. It is hard to deny some effects of this treaty which came afterwards, if we take a look at some of terms that have been agreed and their implications.²³⁴

²³³Clingingsmith and Williamson, “Deindustrialization in 18th and 19th Century India.”

²³⁴Issawi, *The Economic History of the Middle East, 1800-1914*, 38.

Later studies would revert some of these claims and would provide a richer understanding of the deindustrialization process. Şevket Pamuk and his colleague Jeffrey Williamson, embarked upon a series of research which would provide us the relevant extents of deindustrialization and came up with important conclusions. One of them is that one should differentiate between the effects of deindustrialization; it did not have the same kind of effect for all handicrafts activities and all branches of manufacturing at all times. For instance in the first half of the 19th century, de-industrialization in Ottoman Empire has much higher effect compared to the second part of the 19th century up until the First World War.²³⁵ The deleterious effects of deindustrialization on the Ottoman domestic manufacturing, when compared to Latin America for instance, was getting lighter, especially, after the second half of the 19th century and cotton textiles has shown a remarkable resistance against deindustrialization.

Pamuk and Williams, in a different study also argues that that the Treaty of Balta Limanı in 1838, in fact, did hinder Ottomans to protect home industry and the deteriorating effects of deindustrialization as undeniable but it would be wrong to conclude that the whole burden on the suppression of the industrialization process and the presumed deindustrialization of Ottoman Empire should not be referred to one written document which basically adjusted the tariff rates in accordance with the British foreign trade policy²³⁶. Also, Donald Quataert gives support to this claim with this findings.²³⁷ Accordingly, Ottoman-British trade was booming already since the beginning of 19th century; especially when the ‘liberal course’ was already

²³⁵Şevket Pamuk and Jeffrey G. Williamson, “Ottoman de-Industrialization, 1800–1913: Assessing the Magnitude, Impact, and Response,” *The Economic History Review* 64 (2011): 173.

²³⁶Şevket Pamuk, *The Ottoman Empire and European Capitalism, 1820-1913: Trade, Investment, and Production*, Cambridge Middle East Library (Cambridge [Cambridgeshire]; New York: Cambridge University Press, 1987), 20.

²³⁷Donald Quataert, “The Age of Reforms, 1812-1914,” in *An Economic and Social History of the Ottoman Empire, 1300-1914*, ed. Halil İnalcık and Donald Quataert (Cambridge; New York: Cambridge University Press, 1994), 759–943; cited by Pamuk and Williamson, “Ottoman de-Industrialization, 1800–1913,” 161.

set in 1826. In Ottoman case, the value of British exports doubled in late 1820s and doubled after the treaty was signed as well. Based on these evidences, therefore, we could safely assume that the treaty simply formalized the free entry of British products into the Ottoman realm. It was less of a definitive break point in the Ottoman economic history but more like a strong indication of the continuation of a trend, which has been already started.

From the similar line, Donald Quataert also has shown that 'decline' would not be the most appropriate word for Ottoman industry. For him, industrialization was not just about heavy industrialization leap, mechanized production and large-scale production. Instead, Quataert focused into small-scale manufacturing which remained resilient until very late in the first twenty years of 20th century. The economic impact of these technically backward but nevertheless, income and output generating industries, were far from being nullifying immediately.

Recalling the mainstream line of deindustrialization argument once more, generally there emerges a hypothetical link between Ottoman deindustrialization, collapse of the empire up to first ten years of Turkish Republic. Accordingly, while the demolishing effects on the manufacturing industry on the background, Turkish Republic could not do much to revert the trend during its first ten years, between 1920 and 1930. This creates a tendency to neglect the economic developments between roughly between the last decade of the 19th century and the period up until the Etatist years. The forty years in between has been taken as a general standstill in the economic matters. Accordingly, it has been assumed that only during Etatist years, it was possible for the Turkish Republic to modernize its economy and put itself onto the industrialization track with heavy industry leap.

There are two questions appear here: Was economic development of Ottoman Empire really non-existent between this period and did the Etatist turn really gave a momentum to revert the situation upside down?

For the first question, we would like to call for a more continuous approach. As an example, Çağlar Keyder have looked into the Turkish economy within a global network of economic relations and the period he chose the focus was 1923-1929. According to his account, being a peripheral country among the world-economic system would not necessarily entail a total economic stagnation. The world capitalist economy has managed to improve and as a part of it there were many economic developments even in this period up until the Great Depression, as which were hugely discarded by various nationalist scholars who were looking for alternative methods to replace the self-contradicting capitalist model. For these authors, it was the etatist years which was worth looking for.²³⁸ According to Gündüz Ökçün, for instance, banking sector showed pretty remarkable growth until Great Depression of 1929, especially between 1924 and 1928.²³⁹ Vedat Eldem claims that in the beginning of 1920s as well as there was a slight amelioration regarding the life standards²⁴⁰ while capital scarcity stood as an obstacle to growth, the economy was on strong foundations and manage to keep the essentials for a potential growth in the future.²⁴¹

²³⁸Çağlar Keyder, *Dünya Ekonomisi İçinde Türkiye: 1923-1929*, Yurt Yayınları 3 (Ankara: Yurt Yayınevi, 1982).

²³⁹Ahmet Gündüz Ökçün, *İktisat Tarihi Yazıları*, Sermaye Piyasası Kurulu Yayınları ; Bütün Eserleri, yayın no.58. 3 (Ankara: Sermaye Piyasası Kurulu, 1997), 278.

²⁴⁰Vedat Eldem, *Harp ve Mütareke Yıllarında Osmanlı İmparatorluğu'nun Ekonomisi*, Türk Tarih Kurumu Yayınları. VII. Dizi, sa. 98 (Ankara: Türk Tarih Kurumu Basımevi, 1994), 148.

²⁴¹Ibid. 242.

For the second question, we would like to conclude in negative tone. First of all, it would be wrong to claim that etatist turn was genuinely unique in terms of implementation and theoretical background and could be taken as a ‘breaking point’ in Turkish history. Korkut Boratav claims that Etatist turn could hardly be deemed as a revolutionary movement since for him, the definitive steps in order to build a capitalist society and a bourgeois state was taken back in 1908 and not in 1930. Etatism, by best terms, would be the first systematic attempt to implement the relevant tools in order to complete this first step.²⁴²

In addition to this, we should also remark that Turkey was not the only state who have embraced such an economic mind and similar projects were blossoming all over the place. While the Great Depression lowered the prices all over the world markets, it was the raw materials whose prices were lowered even further down when compared to manufacturing goods. Therefore, periphery countries like Turkey suffered even more from this deteriorating terms of trade. Based on this, one could safely assumed that need for such a change was mostly based on external conditions: While the global capitalist economy as suffering from crisis, Turkey was chose a more closed path to develop. The etatist turn did not emerge as a result of changing policy towards economic matters due to ideological positioning to put the country into industrialization track but it was more of a necessity than of a preference.²⁴³

According to Pamuk to overall effects of etatism on the way of industrialization stayed limited. While state was taking initiatives and making investments, the private sector investments were

²⁴²Korkut Boratav, *Türkiye İktisat Tarihi, 1908-1985*, Yeni Dizi 1 (Istanbul: Gerçek Yayınevi, 1995), 60–61.

²⁴³*Ibid.*, 63.

declining and overall, the investment level was staying unchanged largely. Therefore, Pamuk reiterates that the etatism move had only a limited impact on the overall industrialization.²⁴⁴

It is not our intention here to wholly revert the deindustrialization thesis or the strong impact of Etatist turn neither in the conceptual nor empirical level. However, it would be a mistake to confine Ottoman case of industrialization into some certain rigid theoretical structures and leaving the case unexplored. Instead, we would like to establish a more continuous line between the second half of mid-19th century to 20th century in terms of economic matters.

One important limitation of these abovementioned studies of Ottoman economic history was the extensive usage of aggregated national income accounts, GDP per capita, capital inflows or terms of trade could lead us into a wrong direction. They are good indicators of economic developments but far from being the only options; especially on lower levels, i.e. between different regions and cities, the story could be totally different. Throughout the literature, largely written by the help of national income accounts, it is clearly that the links between the large scale industry and small scale manufacturing has been overlooked and the understanding of industrialization experience stayed confined into purely technical terms. However, we would like to maintain the idea that economic development is not only limited to the development of the heavy industry or large-scale production while resilient small scale production or labour-intensive methods would indicate a different type of industrialization, along with the large-scale

²⁴⁴Pamuk, *Türkiye'nin 200 Yıllık İktisadi Tarihi*, 190.

alternative. The relevant consequences could lead so different transformations within the structure of society from various aspects.²⁴⁵

In my opinion, task could not be fulfilled with the orthodox quantitative methodology but instead one would need a special focus on occupational structure in order to follow what kind of social changes did both deindustrialization as well as etatism entailed. One way to do would be making use of a more sophisticated conceptual and methodological toolbox, e.g. working on the censuses with a PSTI, a tool that would make turn the occupational data contained in these different sources come together. In addition to that, giving spatial-temporal concerns a lot more heavy account into the inquiry, would certainly give the researches a deeper understanding regarding both the local context as well as the theory itself.

²⁴⁵The importance and resilience of small-scale industries throughout the economic history of Turkish Republic has been addressed in Berkay Küçükbaşlar, “Small-Scale Industry Matters: Industrialization and Occupational Structure in Turkey between 1927 and 1945” (MA Thesis, Boğaziçi University, 2015).

Occupational Change throughout the Literature

Before we move on to analysis part, we should also mention about some earlier studies on the occupational change which we take as a central topic in thesis project. It goes without saying that abovementioned negligence was due to lack of archival source opportunities. Ottoman state archives were not opened until very recently. Moreover, the type of sources which contains the occupational structure information were not tabulated. Before we move on to our designed analysis, we should provide a review of this literature though.

One of the studies that partly touches occupational structure issue belongs to Emine Zeynep Kıray²⁴⁶. In her PHD thesis, she renders the Ottoman industrialization in the 19th century from the perspective of foreign debts of Ottoman Empire. She claims that these debts shaped the Ottoman integration with global capitalist world economy and entailed a kind of hybrid structure: a society struggling between modern capitalist and traditional feudal relations. Ottomans had to developed ways to keep up with global world economy, it has failed and later on, recovered. It seems that Kıray also keeps the ‘failure’ notion at stake. The occupational structure does not appear as a tool of analysis, but as a derived variable: the occupational change was still followed through an established list of financial indicators, capital influx and the land allocation structure as a derivative inference. Kemal Karpat²⁴⁷ and later on, Yavuz Cezar²⁴⁸ has quite a few publications which we can take as attempts to address the occupational issue,

²⁴⁶Emine Kıray, *Osmanlı'da Ekonomik Yapı ve Dış Borçlar*, İletişim Yayınları 256 (İstanbul: İletişim, 1993), 173–80.

²⁴⁷Kemal H. Karpat, *Studies on Ottoman Social and Political History: Selected Articles and Essays*, Social, Economic, and Political Studies of the Middle East and Asia, v. 81 (Leiden, The Netherlands ; Boston: Brill, 2002).

²⁴⁸Yavuz Cezar, “From Financial Crisis to the Structural Change: The Case of the Ottoman Empire in the Eighteenth Century,” *Oriente Moderno*, 1999, 49–54.

but their works focuses more on social stratification during the industrialization than occupational change.

One remarkable study undertaken by Cengiz Kırılı who brought together the private shop ownership data from an Ottoman survey in the early nineteenth century around Bosphorus and Golden Horn ²⁴⁹ We learn a handful of details about the ‘esnaf’ or ‘craftsman’ profile regarding the alleged time and location, about the ethnic structure, occupational structure, employment and shops size, religious profiles, migration networks and the extent of military involvement in the small shops and craftsmanship. He came to the conclusion that ethno-religious specializations into occupations were present but one should be cautious about the demarcation lines; it would not be so sharp. ²⁵⁰

For our purposes, the results obtained from valuable study would not contribute since occupational structure of neither Bursa nor Ankara was a part of it. Moreover, it was a study which was taking only one survey into consideration but not many.

When we look at the research, regarding the occupational structure after Republican Turkey has been established up until 1960s, the situation is no better than the pre-Republican era. An important work of Haluk Cillooy stands as the only detailed exploration towards the issue of occupational structure. After Turkish Statistical Institution have made occupational data available after 1970s, the literature has started to grow. Yahya Sezai Tezel, draws attention to

²⁴⁹Cengiz Kırılı, “A Profile of the Labor Force in Early Nineteenth-Century Istanbul,” *International Labor and Working-Class History* 60 (2001): 125–40.

²⁵⁰Ibid.138.

vitalize the occupational structure.²⁵¹ He processed the data gathered from 1927 and 1972 population census by adjusting and correcting them, classifying as primary-secondary-tertiary categories. Later on, he extended this analysis with more years and a cross sectional analysis, based on the data compiled from 1927, 1935, 1950, 1962, 1972, 1982 and 1992.²⁵² However, the structural shift, again, has not been the main focus.

²⁵¹Y. S. Tezel, “Turkish Economic Development 1923-1950 Policy and Achievements” (Unpublished Ph.D. Thesis, University of Cambridge, 1975).

²⁵²Yahya Sezai Tezel, *Cumhuriyet Döneminin İktisadi Tarihi (1923-1950)*, 3. bs, Türkiye Araştırmaları Dizisi; 10 (İstanbul: Türkiye Ekonomik ve Toplumsal Tarih Vakfı, 1993).

Summary: Two Prominent Industrialization Debates of Ottoman Empire and Turkish Republic

As a brief summary of the introductory part of the chapter above: It would be unwise to totally revert the claim of ‘failed Ottoman case of industrialization’ whose deleterious effects were almost lasted up until the Etatist initiative. Without a doubt, under the conditions of Balta Limanı Treaty there were poor incentives for a domestic manufacturing manoeuvre. It is a fact that Sublime Port could not manage to lead Ottoman Empire into a big-scale, heavily mechanized industrialization path and Ottoman Empire did stay as a largely rural country, agriculturally based economy up until 1930s. However, based on these, one should rather ask, does the lack of mechanization in the production process as well as the failure in the transformation of output composition from an agricultural to more sophisticated, heavy industry related goods essentially halts the occupational transformation? How does the resilience of handicrafts and other types of small-scale production reflected from the perspective of social change? Does being stuck on a rather peripheral role within the world economy due to a crippled industrialization process, essentially points to a collapse of economic developments all together? In my opinion, placing occupational change into central focus would provide us a more complete regarding these questions and hence, a more comprehensible history of Ottoman industrialization.

Occupational Transformation in the City of Bursa: 1845-1945

General Facts: Bursa

The establishment of the city of Bursa, as an urban settlement goes back to Byzantine times, when it was found as a capital. However, it was the Ottomans, by administrative means, brought the city into prominence which was once suffering from being overshadowed by İznik, İzmit and İstanbul in terms of various aspects. ²⁵³

Bursa was the first capital for the fledging Ottoman Empire which remained its status until Edirne takes its place back in the 14th century, the city has gained a reputation as a commercial and industrial centre due to rising trend from Europe.

However, regarding its history throughout the Ottoman era, we could fairly say that the story of Bursa was not a never-ending story of success and there were ups and downs. Against this, however, the fact which has the utmost importance was that, the city has displayed a remarkable continuity in its commercial and urban life. Despite there were times when the city has lost its previous importance, it has been never was fell into oblivion fully and like a swinging pendulum, the popularity, wealth and industry of Bursa as an urban centre, came back and forth; but no merchant, entrepreneur, governor or the ruler had the luxury to have an indifferent

²⁵³Sevim Sezai, "Osmanlı Bursa'sına Grup Yerleşimleri Hakkında Bazı Bilgiler," in *Bir Masaldı Bursa*, ed. Engin Yenal (İstanbul: Yapı Kredi, 1996), 145–159.

attitude towards the city. Even today, Bursa remains to be among the most prominent cities coming after Istanbul, Ankara and İzmir.

The fortunes of Bursa have changed after the collapse of Ilkhanid Empire in 14th century and hence, Bursa became the centre of raw silk trade from Asia to Europe through the Genevese merchants stationed in Pera. In the 15th century Bursa even replaced Tebriz as a commercial hub. ²⁵⁴ Beside silk trade, city market has also witnessed various kind of goods traded on the way, Western woollen cloths which were mainly exported to Iran, sugar from Egypt and Cyprus, as well as spices from India were available. ²⁵⁵ After the conquest of Constantinople, the silk trade inclination has been aggravated and the city turned into a transportation hub. During late 15th and early 16th centuries, there were annually six caravans carrying 120 tons of raw silk. This specific geographical advantageous feature of the city will keep its importance throughout the following centuries and even contemporary times. ²⁵⁶

This demand for raw silk has reached its climax in the 17th century where exports to Britain has grown immensely²⁵⁷ but soon, due to the discovery of new trade routes, mainly British and Dutch as well as Celali revolts²⁵⁸, heavy tax burden on silk trade changed the picture.²⁵⁹ Moreover especially after the cost of importing raw silk from Iran has increased

²⁵⁴Halil İnalçık, “Türkiye’nin Tekstil Tarihçesi Üzerine Notlar,” in *Bir Masaldı Bursa*, ed. Engin Yenil (İstanbul: Yapı Kredi, 1996), 62.

²⁵⁵Halil İnalçık, “Bursa and Silk Trade,” in *An Economic and Social History of the Ottoman Empire, 1300-1914*, ed. Halil İnalçık and Donald Quataert (Cambridge ; New York: Cambridge University Press, 1994), 218–230.

²⁵⁶{Citation}

²⁵⁷Murat Çizakça, “XIV.-XIX. Yüzyıllar Arasında Bursa İpekçiliği,” in *Bir Masaldı Bursa*, ed. Engin Yenil (İstanbul: Yapı Kredi, 1996), 73.

²⁵⁸ Celali revolts were a series of rebellions in Anatolia of irregular troops led by provincial administrations known as celalî, against the authority of the Ottoman Empire in the 16th and 17th centuries

²⁵⁹ Ethem Eldem, Daniel Goffman, and Bruce Alan Masters, *The Ottoman City between East and West: Aleppo, Izmir, and Istanbul* (New York: Cambridge University Press, 1999), 88–90.

during the 18th century led to a ‘profit squeeze’ for manufacturers as well.²⁶⁰ While this was a blow for the most important means of income of the city, raw silk trade, it did not turn into a complete catastrophe. Turning this downfall into an opportunity, some of the innovative manufacturers of Bursa changed its direction for production to cloth manufacturing, which remained mostly behind the raw silk trade. One should note that also, these initiative did not stay permanent or gave long-term positive results.²⁶¹ The swinging pendulum will change direction once more, by the early 19th century as there appeared a rising demand from Western Europe. Once again, Bursa regained its popularity among other raw silk exporter cities.²⁶²

Bursa, thanks to its favourable location regarding trade routes throughout 13th to 18th century, has developed a fairly commercial and urbanized economy and social formation. In 1560, the city population has been estimated to be 36,000 around mid-16th century according to 1530-1531 tax registers.²⁶³ While the textile and silk business turned out to be a lucrative deal for everyone involved, in-migrations has made the city population grow. The total population of the city will continue to rise, almost without interruption until 19th century despite the ups and downs in the city industry. It has been estimated that during 19th century the population was altering around 40,000 to 75,000.²⁶⁴ According to Leyla Erder, in 1830, there were some 60,000 people living and she notes that the population the city fell to 35,000 in 1870 due to high

²⁶⁰Suraiya Faroqhi, “Declines and Revivals in Textile Production,” in *The Cambridge History of Turkey*, ed. Kate Fleet, Suraiya Faroqhi, and Reşat Kasaba (New York: Cambridge University Press, 2006), 362–363.

²⁶¹Murat Çizakça, “A Short History of the Bursa Silk Industry (1500-1900),” *Journal of the Economic and Social History of the Orient* 23, no. 1–2 (1980): 260–261.

²⁶²Donald Quataert, *Ottoman Manufacturing in the Age of the Industrial Revolution*, Cambridge Middle East Library ; 30 (Cambridge ; New York: Cambridge University Press, 1993), 117.

²⁶³Suraiya Faroqhi, *Subjects of the Sultan: Culture and Daily Life in the Ottoman Empire* (London: I.B. Tauris, 2000), 43.

²⁶⁴Emre Satici, “19. Yüzyılda Hüdavendigâr Eyaleti” (Ankara University, 2008), 69–74.

mortality rates as well as vagaries of silk trade. ²⁶⁵ We must also take into consideration that the city have suffered from a devastating earthquake in 1855.

Based on this introductory part, as the next task, I would like to present the results of my analysis regarding occupational structure in the city of Bursa, among total and working population, using 1845 tax survey registers, 1927-1935 and 1945 National Census records via PSTI codification system. I would like to track the occupational shift and put the economic history of Bursa in the background, I would like to check in what sense does the industrialization experience of Bursa be placed within general industrialization literature as well as Turkish context which was dominated by ‘deindustrialization’ and ‘etatism’ notions. This would be done within four aspects: population progress, PSTI sectoral occupational shift (first digit only), PSTI sub-sectoral occupational (second digit) shift within secondary and tertiary sectors. Each subsection has a gender differentiation if data is available and a comparison between different years of data sources in the end of each subsection.

²⁶⁵Thayer Leila Erder, “The Making of Industrial Bursa: Economic Activity and Population in a Turkish City 1835-1975” (Unpublished PhD Dissertation, Princeton University, 1976), 156–157.

Results and Analysis: Bursa

Population Change in Bursa: 1845-1945

Table 26-Bursa 1845 Population Gender Allocation

1845 BURSA (# numbers,% shares)	MALE #	MALE %
NON-WORKING	15106	89%
WORKING POPULATION	1831	11%
TOTAL POPULATION	16937	100%

Chart 107-Bursa 1845 Population Gender Allocation

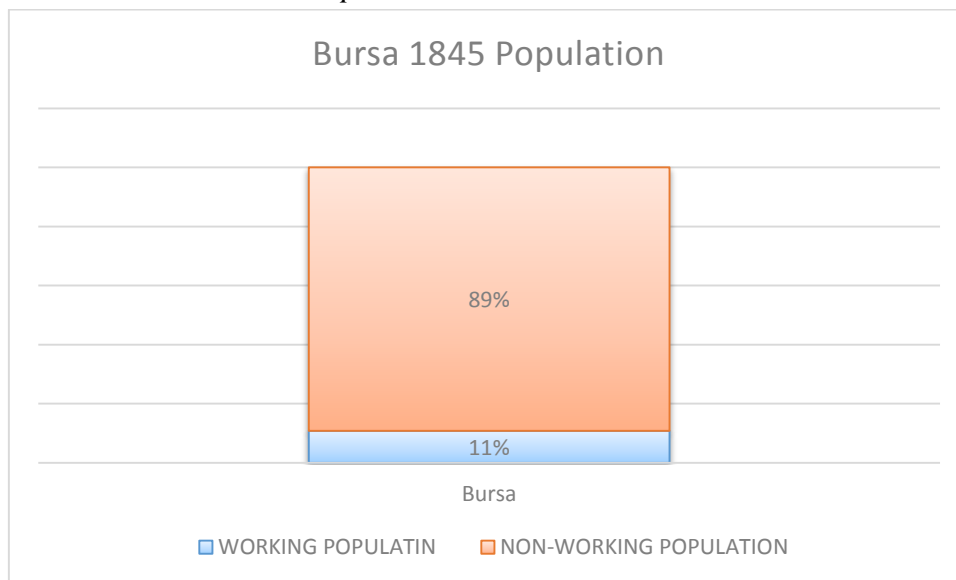


Table 27-Bursa 1927 Population Gender Allocation

BURSA 1927 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %	BURSA 1927	MALE %	FEMALE %
NON-WORKING POPULATION	12752	29919	42671	42%	96%	69%	NON-WORKING POPULATION	30%	70%
WORKING POPULATION	17805	1214	19019	58%	4%	31%	WORKING POPULATION	94%	6%
TOTAL POPULATION	30557	31133	61690	100%	100%	100%	TOTAL POPULATION	50%	50%

Chart 108-Bursa 1927 Population Gender Allocation

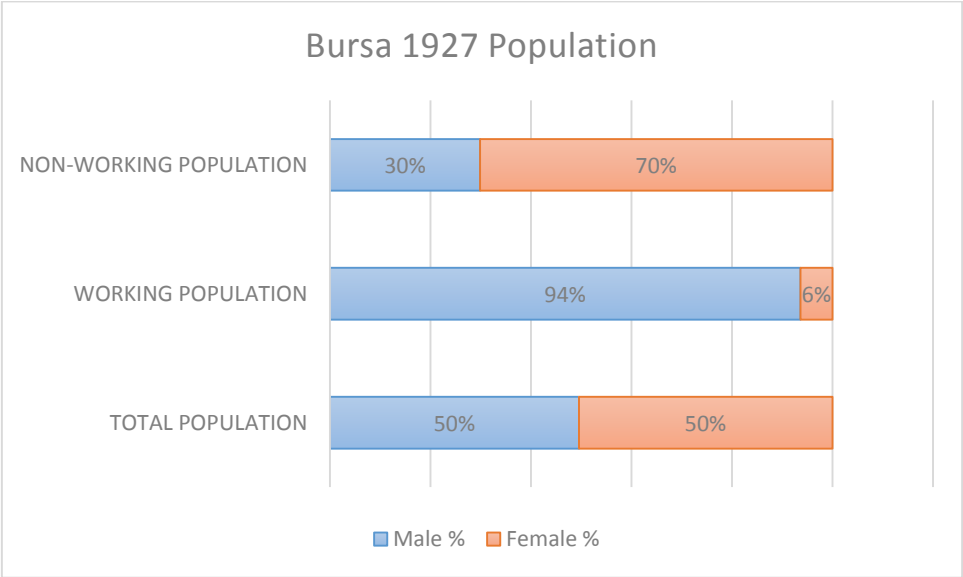


Table 28-Bursa 1935 Population Gender Allocation

BURSA 1935 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %	BURSA 1935	MALE %	FEMALE %
NON-WORKING POPULATION	11464	11065	22529	32%	30%	31%	NON-WORKING POPULATION	51%	49%
WORKING POPULATION	23850	25808	49658	68%	70%	69%	WORKING POPULATION	48%	52%
TOTAL POPULATION	35314	36873	72187	100%	100%	100%	TOTAL POPULATION	49%	51%

Chart 109- Bursa 1935 Population Gender Allocation

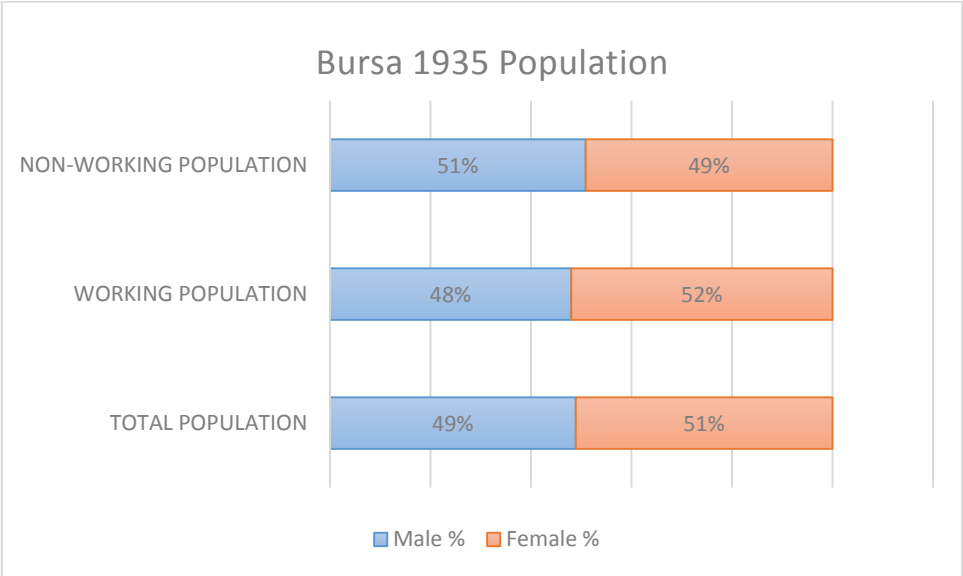
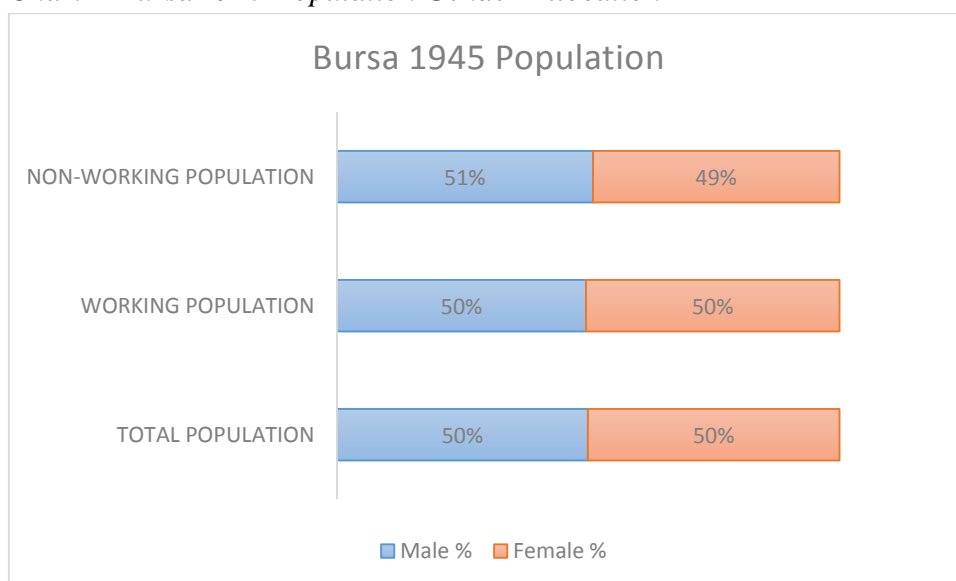


Table 29-Bursa 1945 Population Gender Allocation

BURSA 1945 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %	BURSA 1945	MALE %	FEMALE %
NON- WORKING POPULATION	12230	11784	24014	28%	27%	28%	NON- WORKING POPULATION	51%	49%
WORKING POPULATION	30697	31208	61905	72%	73%	72%	WORKING POPULATION	50%	50%
TOTAL POPULATION	42927	42992	85919	100%	100%	100%	TOTAL POPULATION	50%	50%

Chart 1-Bursa 1945 Population Gender Allocation



General Outlook 1845-1945

Table 30- Bursa 1845-1945 Population Growth

BURSA numbers,% shares)	(# 1845 MALE #	1927 MALE #	1927 FEMALE #	1927 BOTH #	1935 MALE #	1935 FEMALE #	1935 BOTH #	1945 MALE #	1945 FEMALE #	1945 BOTH #
NON- WORKING POPULATION	15106	12752	29919	42671	11464	11065	22529	12230	11784	24014
WORKING POPULATION	1831	17805	1214	19019	23850	25808	49658	30697	31208	61905
TOTAL POPULATION	16937	30557	31133	61690	35314	36873	72187	42927	42992	85919
LABOR PARTICIPATION RATES	%11	58%	4%	31%	68%	70%	69%	72%	73%	72%

Chart 110- Bursa 1927-1945 Male Population-Labour Participation Rates

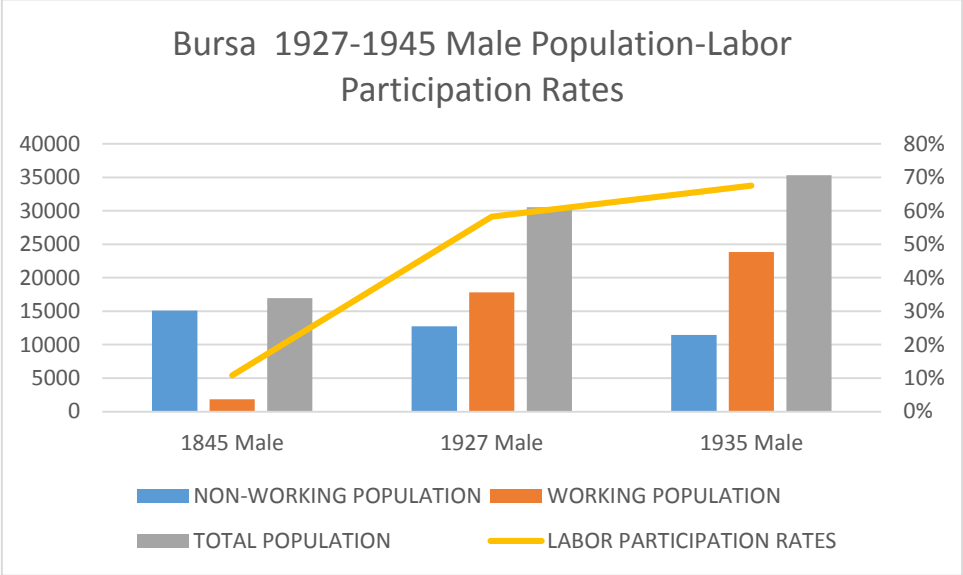


Chart 111- Bursa 1927-1945 Male Population-Labour Participation Rates

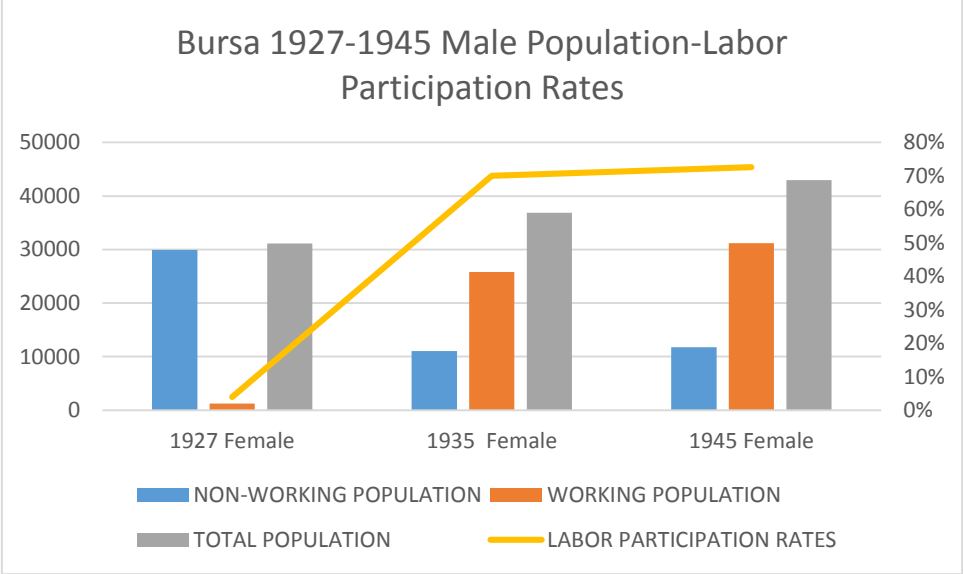
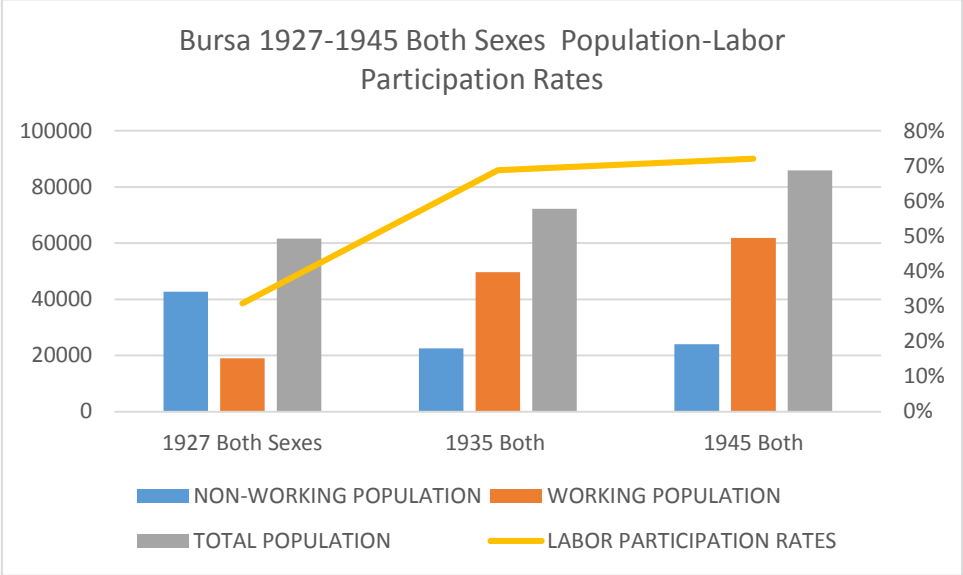


Chart 112- Bursa 1927-1945 Both Sexes Population-Labour Participation Rates



As we can read from Table and Chart, in 1927, the city of Bursa had a population of 61690 whereas male-female gender balance was even at 50%-50%. However, most of working population was consisted of males (%94) meanwhile, labour participation rate of males were %58 where the same figure for females appears as only 4%.

Coming to 1935, we observe an upward change in total population by %17 whereas females have a slightly higher total population growth rate than males. However, an immense change in the female working population has been observed which undermines the reliability level of 1927 Census resource as a source of occupation. In 1935, gender balances in the total population is nearly as same as 1927 whereas females accounts for the majority of the working population by a marginal difference. (%49-%51). Probably, there were huge problems that have been recorded especially regarding female working population in 1927 Census records and the relevant rates were misleading. The census of 1935 provides a better insight on female labour participation rates and hence, occupational structure.

Coming to 1945 from 1935, we could observe that both total population as well as working population rates improve whereas labour participation rate soars. This could be taken as a pre-indicator of the impact of state led industrialization policy that we have mentioned about in the introductory part of this chapter.

Between 1927 and 1945, the labour participation rates as well as total population are on the rise for both sexes. In fact, between 1927 and 1945, the female labour purification performs a giant leap which would undermine the reliability of 1927 census records. Such an increase would be highly unlikely in only eight years.

Summary of Charts: Bursa Population Change 1845-1945

Looking through 1845-1945 period, we could observe that total population, starting from an amount of 16,000 in 1845 (for males) and then, 61690 for both sexes combined in 1927, reaches to 85919 in 1945. The most important fact regarding the population progress was that the amount of non-working population, which was at great heights in 1845 as well as 1927, especially for females, continues to be outclassed by the rising amount of working population. In the meantime, population growth appears to be continuous between 1845 and 1945. Considering 'de-industrialization' notion, even if we assume that this process has seriously damaged Ottoman manufacturing industry and led to a halt in the progression on the industrialization 'stages', Bursa city population does not seem to be stagnant. Regarding 'etatist era' and its presumed positive impact for reaching great industrial leap, the case remains inconclusive since we do not know whether the rise in the population between 1927-1945 was

stemming from enhanced employment opportunities or output growth in terms of variability and effectiveness.

Sectoral Occupational Transformation in Bursa: 1845-1945

Table 31-Bursa 1845 Total Male Population

1845 MALE (# numbers,% shares)	MALE #	MALE %
PRIMARY	248	1%
SECONDARY	611	4%
TERTIARY DEALERS	87	1%
TERTIARY SELLERS	52	0%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	408	2%
TRANSPORT AND COMMUNICATIONS	52	0%
SECTORALLY UNSPECIFIC	15	0%
WITHOUT OCCUPATION OR UNSTATED	358	2%
WORKING POPULATION	1831	11%
NON-WORKING	15106	89%
TOTAL POPULATION	16937	100%

Chart 113- Bursa 1845 Total Male Population

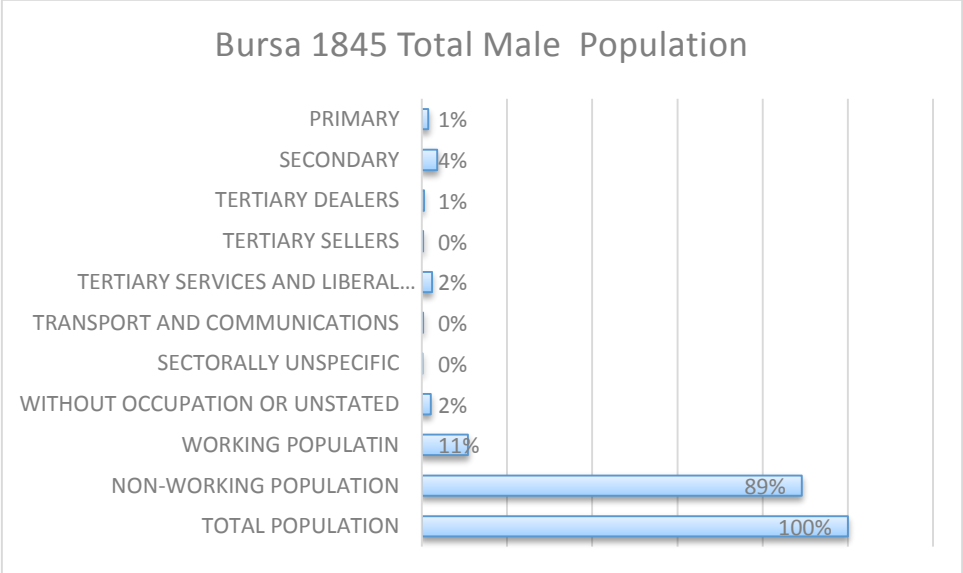
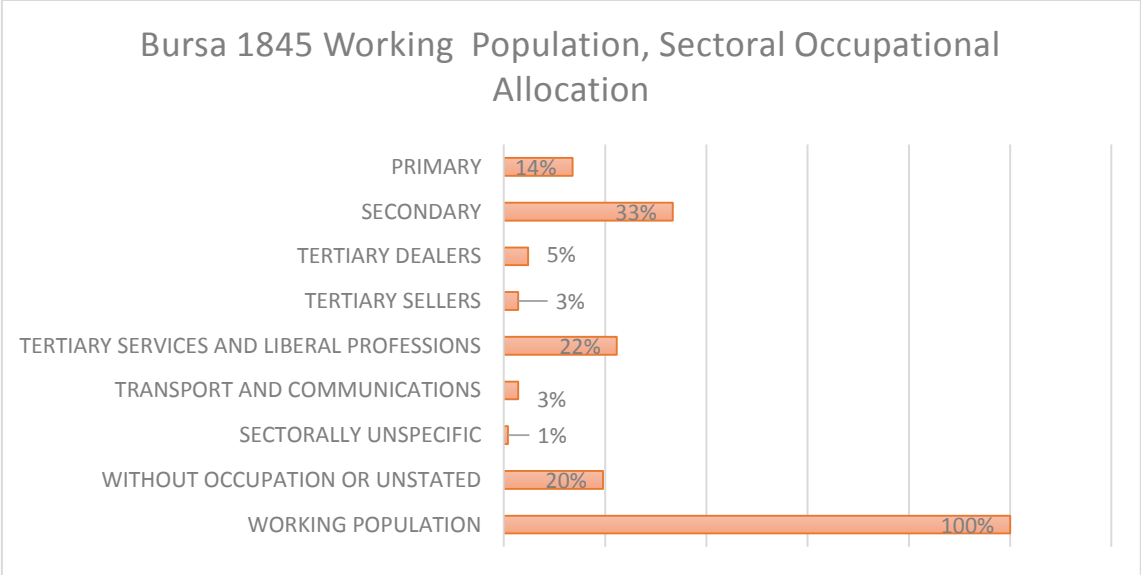


Table 32- Bursa 1845 Working Population, Sectoral Occupational Allocation

1845 MALE (# numbers,% shares)	MALE #	MALE %
PRIMARY	248	14%
SECONDARY	611	33%
TERTIARY DEALERS	87	5%
TERTIARY SELLERS	52	3%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	408	22%
TRANSPORT AND COMMUNICATIONS	52	3%
SECTORALLY UNSPECIFIC	15	1%
WITHOUT OCCUPATION OR UNSTATED	358	20%
WORKING POPULATION	1831	100%

Chart 114-Bursa 1845 Working Population, Sectoral Occupational Allocation



Summary of Charts: Bursa 1845 Sectoral Occupational Allocation

Regarding 1845 temettuat registers of Bursa, we could see that secondary sector has the greatest share among all other PSTI sectors while tertiary services and liberal professions also have a considerable share. Primary sector stays behind these two, probably because we are undertaking our analysis in an urban setting. Nevertheless, temettuat records (tax survey registers) of 1845 gives the impression that Bursa was not an agricultural based rural town and apart from secondary sector activities, the economic needs of local, national or international context led a

tertiary sector to grow. An unorthodox industrialization process in Bursa, that is, without any heavy industry or mechanized production process, might have started earlier than it has been presumed.

Table 33- Bursa 1927 Total Population, Sectoral Occupational Allocation

BURSA 1927 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH #
PRIMARY	4172	841	5013	14%	3%	8%
SECONDARY	5119	169	5288	17%	1%	9%
RETAIL AND WHOLESALE	3938	66	4004	13%	0%	6%
REST OF TERTIARY	4576	138	4714	15%	0%	8%
NON-WORKING POPULATION	12752	29919	42671	42%	96%	69%
WORKING POPULATION	17805	1214	19019	58%	4%	31%
TOTAL POPULATION	30557	31133	61690	100%	100%	100%

Chart 115- Bursa 1927 Total Population, Sectoral Occupational Allocation

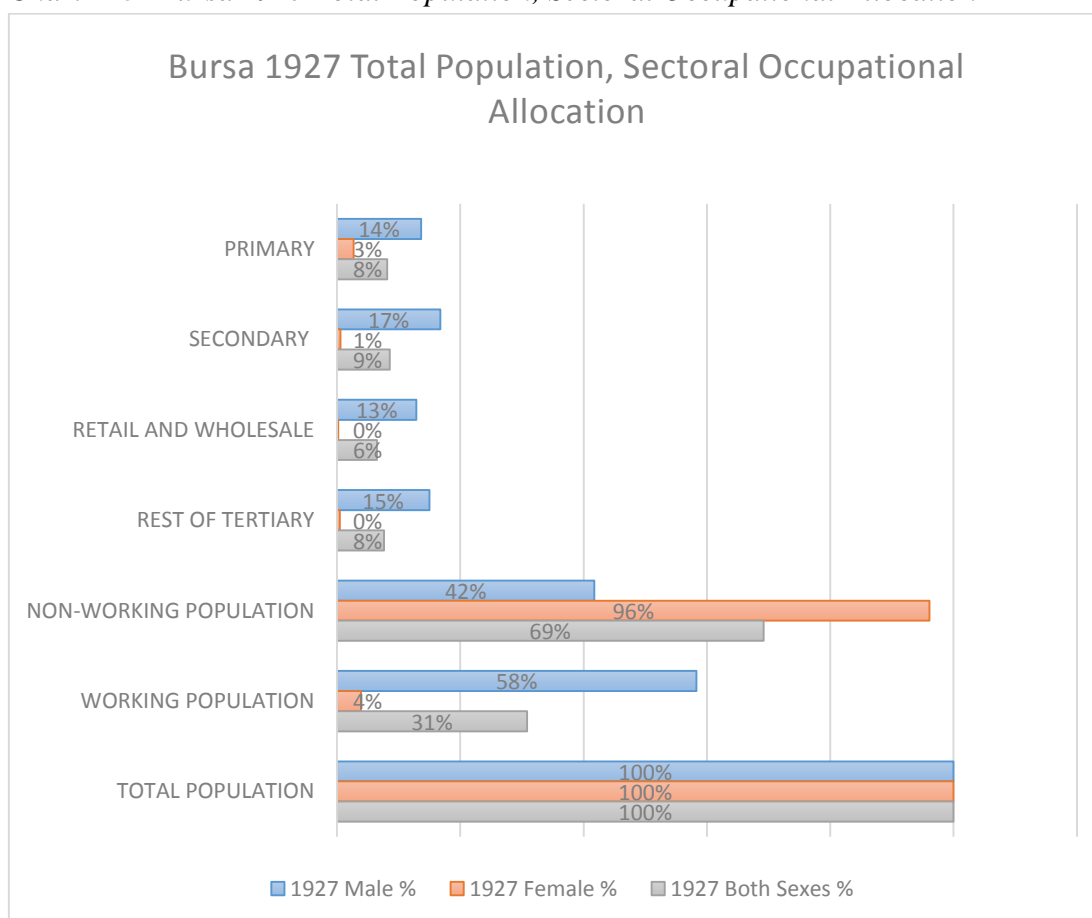


Table 34-Bursa 1927 Working Population, Sectoral Occupational Allocation

BURSA 1927 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH #
PRIMARY	4172	841	5013	23%	69%	26%
SECONDARY	5119	169	5288	29%	14%	28%
RETAIL AND WHOLESALE	3938	66	4004	22%	5%	21%
REST OF TERTIARY	4576	138	4714	26%	11%	25%
WORKING POPULATION	17805	1214	19019	100%	100%	100%

Chart 116- Bursa 1927 Working Population, Sectoral Occupational Allocation

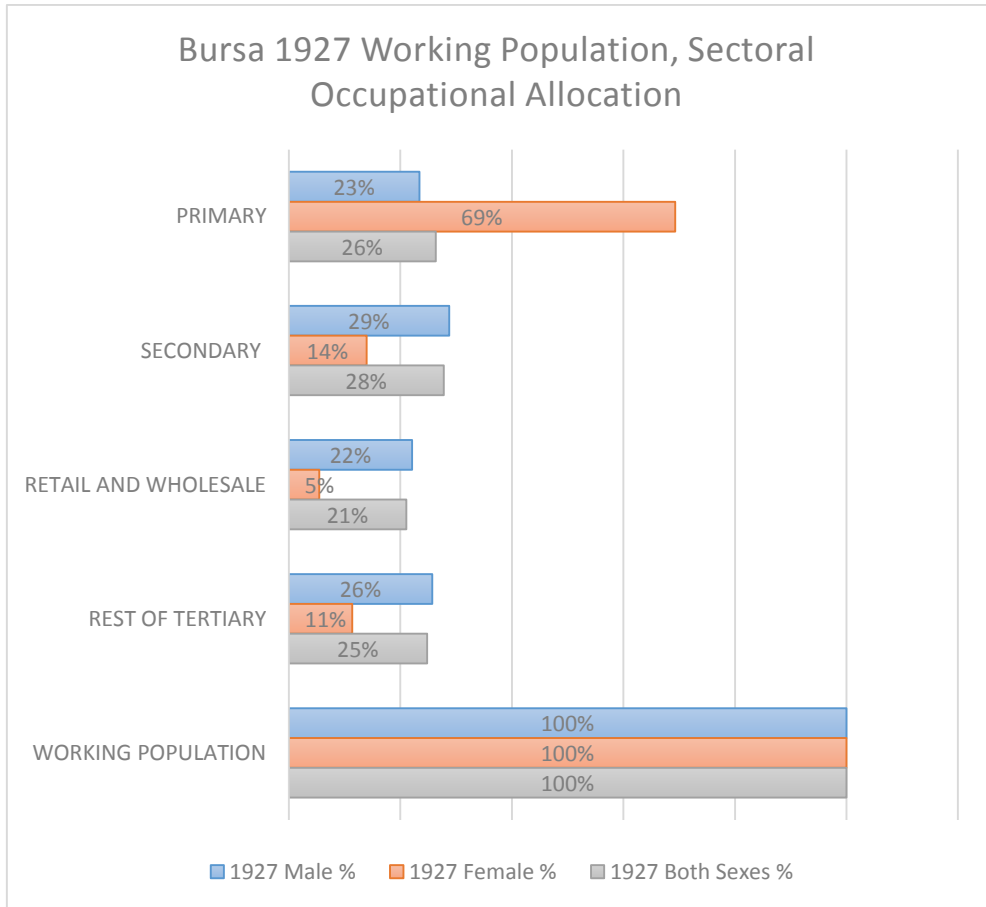
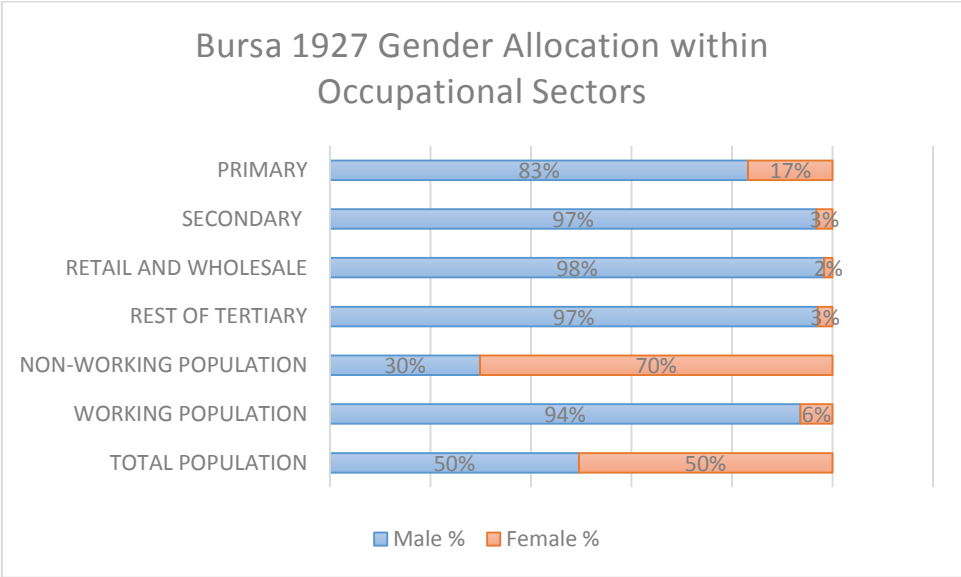


Chart 117-Bursa 1927 Gender Allocation within Occupational Sectors



Summary of Charts: Bursa 1927 Sectoral Occupational Allocation

According to 1927 Census records, %69 of total population does not take part in productive activities. Moreover, %96 of females labelled under non-working population title. Therefore, it would not mean much to include female occupational structure, in relation with Census of 1926 registers. Regarding males, labour participation rate is around %58, which stand as a much more reasonable figure which indicates that occupational data could be more safely processed.

Accordingly, we observe that the male occupational structure is evenly diversified among PSTI sectors where almost every PSTI sector gets around %15 share. This would mean that some part of the share of secondary sector from 1845, has been transformed into tertiary sector activities, like retail and wholesale or in other terms, tertiary dealers and sellers. The resilience of primary sector occupations also draws attention. Throughout the years between 1845 and 1926, one would expect the primary sector occupations would lose at least a few shares, if we

consider that Ottoman Empire has partly modernized its industry and at least there were a few signs of industrialization in the technical sense.²⁶⁶

When we look at working population instead of total population, we could more clearly see that primary sector activities still remains to be an important source of occupation whereas tertiary sector related activities are almost covering a half of male working population occupations. Secondary sector is only slight larger in shares among male working population, than primary sector related activities.

Females were largely out of working population in 1926 but the ones who remain in the labour force, predominantly were engaged in primary sector activities. Despite this, gender breakdown of primary sector tells us that like all other PSTI sectors, primary sector occupations were also largely owned by male population.

Very high engagement within tertiary sector activates among Bursa male working population also brings the reliability issues of the census of 1927. It is highly unlikely that tertiary sector activates have doubled in shares among all other PSTI sectors from 1845 to 1927 in Bursa.

²⁶⁶ By 'technical sense', I would like to point to the orthodox understanding of industrialization process which could be quantifiable via national income methods, like GDP figures or output composition which are supply-sided indicators. Accordingly, the weight of productive of activities in 'technically' industrializing country would move from agriculture to other sectors like secondary or tertiary sector related activities.

Table 35- Bursa 1935 Total Population, Sectoral Occupational Allocation

BURSA 1935 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	2935	532	3467	8%	1%	5%
SECONDARY	7254	2140	9394	21%	6%	13%
TERTIARY DEALERS&SELLERS	3490	125	3615	10%	0%	5%
TERTIARY SERVICES&PROFESSIONS	4575	643	5218	13%	2%	7%
TRANSPORT&COMMUNICATIONS	1271	10	1281	4%	0%	2%
WITHOUT OCCUPATION OR UNSTATED	4325	22358	26683	12%	61%	37%
NON-WORKING POPULATION	11464	11065	22529	32%	30%	31%
WORKING POPULATION	23850	25808	49658	68%	70%	69%
TOTAL POPULATION	35314	36873	72187	100%	100%	100%

Chart 118- Bursa 1935 Total Population, Sectoral Occupational Allocation

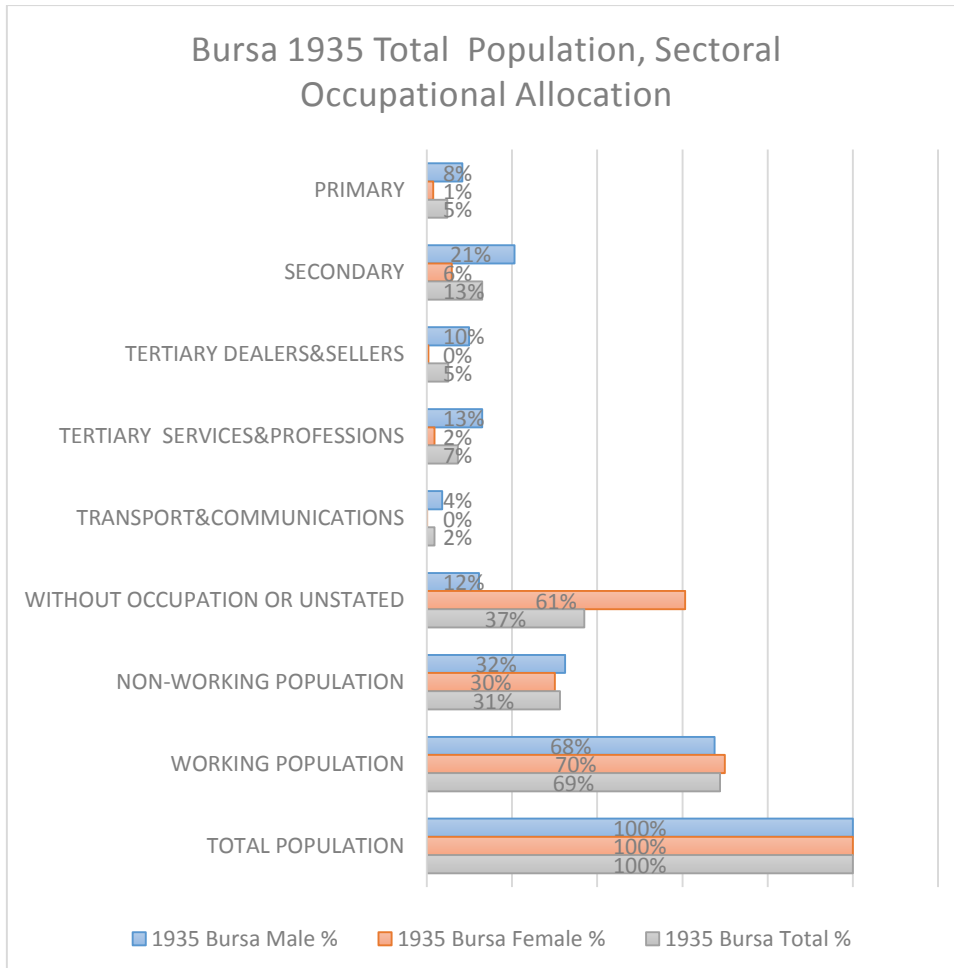
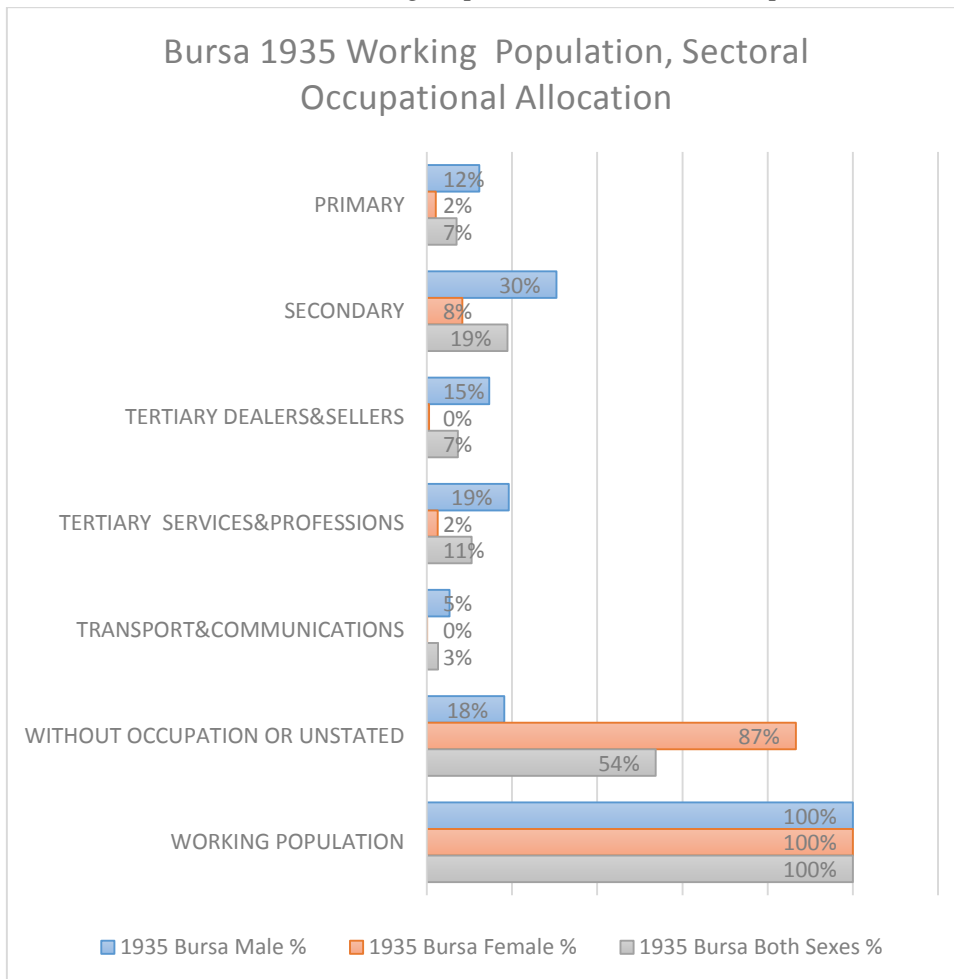


Table 36- Bursa 1935 Working Population, Sectoral Occupational Allocation

BURSA 1935 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH%
PRIMARY	2935	532	3467	12%	2%	7%
SECONDARY	7254	2140	9394	30%	8%	19%
TERTIARY DEALERS&SELLERS	3490	125	3615	15%	0%	7%
TERTIARY SERVICES&PROFESSIONS	4575	643	5218	19%	2%	11%
TRANSPORT&COMMUNICATIONS	1271	10	1281	5%	0%	3%
WITHOUT OCCUPATION OR UNSTATED	4325	22358	26683	18%	87%	54%
WORKING POPULATION	23850	25808	49658	100%	100%	100%

Chart 119- Bursa 1935 Working Population, Sectoral Occupational Allocation



Summary of Charts: Bursa 1935 Sectoral Occupational Allocation

Coming to 1935, working population, for both males and females reach 70%. However, this does not alleviate the problems related with female working population in the census records since according to census registers of 1935, %61 of total females were labelled as ‘without occupation or unstated’. Without a doubt, such a figure would undermine the occupational analysis from explanatory aspect. Nevertheless, it is obvious that significant part of females, who were not included in census registers 1927 as ‘working population’ are in fact, classified under ‘working population’ title in 1935. Regarding males, the same rate is about %10 which could be regarded as unemployment rate.

Regarding working population, we could observe in 1935, Bursa working males finally started to get away from agricultural occupations. Meanwhile, secondary and tertiary sectors, having more or less same share with corresponding figure in 1935 (tertiary leading by a small margin, around 35%) indicates that among city working population there have been recorded a slight occupational transformation where, male working population breaking away from agricultural occupations to secondary and tertiary sectors. Apparently, working population which has migrated away from primary sector occupations has been included under ‘without occupation or unstated’ title. Unfortunately, regarding 1927 Census records, we could not differentiate with ‘unemployed’ and ‘not capable of having an occupation’ (since they were classified together as ‘no or unstated occupation’)

Table 37- Bursa 1945 Total Population, Sectoral Occupational Allocation

BURSA 1945 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH%
PRIMARY	2674	264	2938	6%	1%	3%
SECONDARY	9788	1975	11763	23%	5%	14%
TERTIARY DEALERS&SELLERS	4199	138	4337	10%	0%	5%
TERTIARY SERVICES&PROFESSIONS	5852	706	6558	14%	2%	8%
TRANSPORT&COMMUNICATIONS	1403	31	1434	3%	0%	2%
WITHOUT OCCUPATION OR UNSTATED	6781	28094	34875	16%	65%	41%
NON-WORKING POPULATION	12230	11784	24014	28%	27%	28%
WORKING POPULATION	30697	31208	61905	72%	73%	72%
TOTAL POPULATION	42927	42992	85919	100%	100%	100%

Chart 120- Bursa 1945 Total Population, Sectoral Occupational Allocation

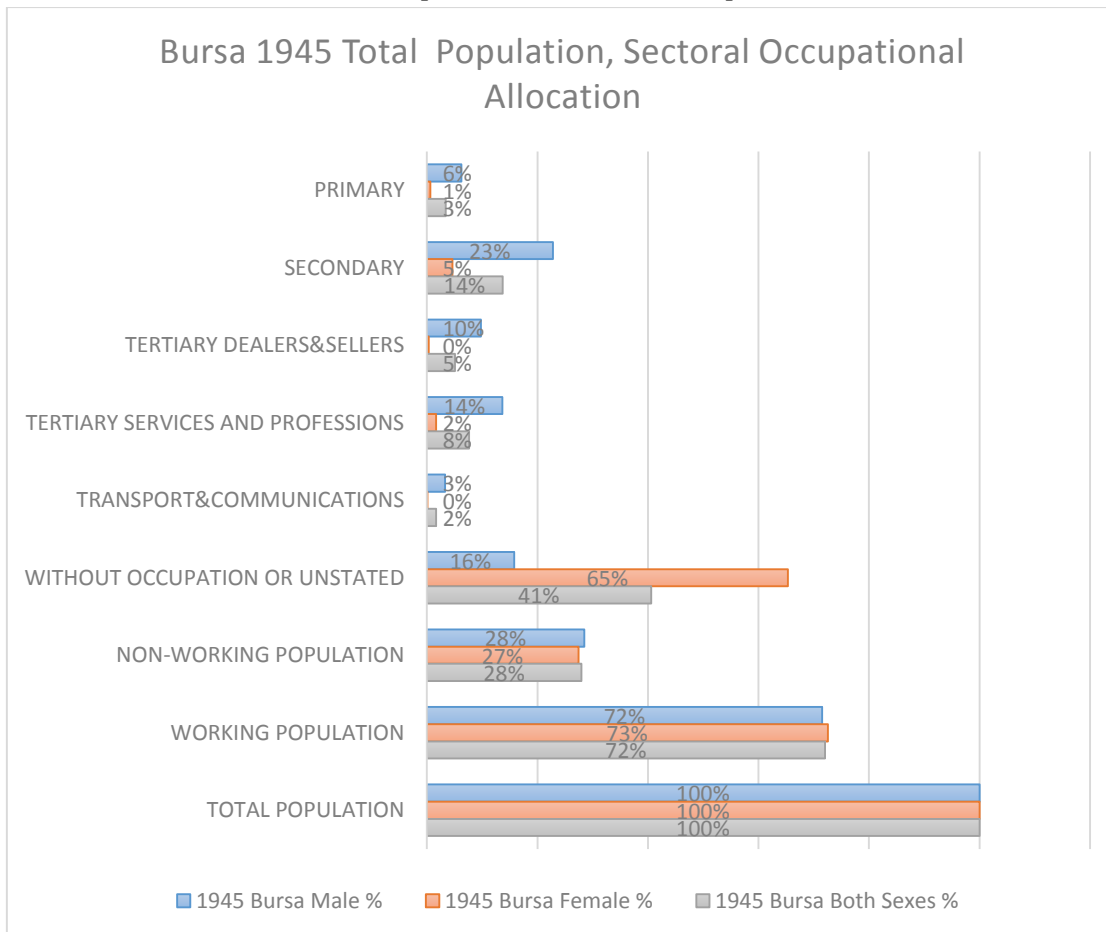
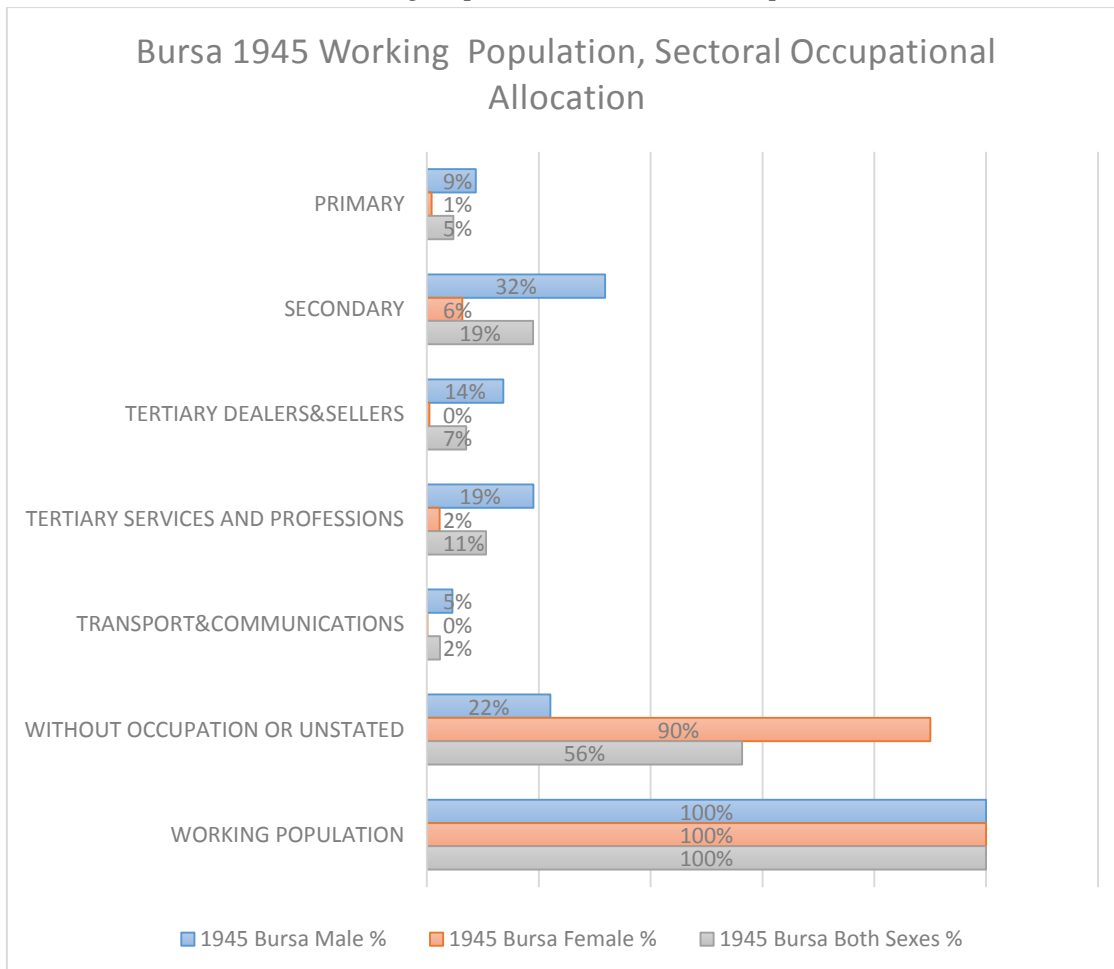


Table 38- Bursa 1945 Working Population, Sectoral Occupational Allocation

BURSA 1945 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH%
PRIMARY	2674	264	2938	9%	1%	5%
SECONDARY	9788	1975	11763	32%	6%	19%
TERTIARY DEALERS&SELLERS	4199	138	4337	14%	0%	7%
TERTIARY SERVICES&PROFESSIONS	5852	706	6558	19%	2%	11%
TRANSPORT&COMMUNICATIONS	1403	31	1434	5%	0%	2%
WITHOUT OCCUPATION OR UNSTATED	6781	28094	34875	22%	90%	56%
WORKING POPULATION	30697	31208	61905	100%	100%	100%

Chart 121- Bursa 1945 Working Population, Sectoral Occupational Allocation



Summary of Charts: Bursa 1945 Sectoral Occupational Allocation

Regarding Census registers of 1945, in the city of Bursa, labour participation rate have slightly increased compared to 1935. However, we could observe that %65 of females who were registered to be among working population, does not have a stated occupation. This figure has been apparently improved for our purposes when compared to 1935 however, still, the high rate of non-working female population limits our analysis for the city of Bursa with only one gender: males.

Regarding working males in Bursa 1945, we could observe that agricultural occupations have further decreased and for the first time, fell below 10%. This mitigation would not be reflected in secondary or tertiary sectors though; both sectors keep their previous share more or less the same. Instead, the rate of unemployment increases above 20% level. Therefore, we could say that no drastic changes in related with occupational transformation, between 1935 and 1945 were recorded. However, these seemingly stagnant rates of occupational sectors might signify the strong reliability of the two census records as a source of occupational transformation analysis.

General Outlook: 1845-1945

Chart 122- Bursa Total Population Male Sectoral Occupational Allocation 1845-1945

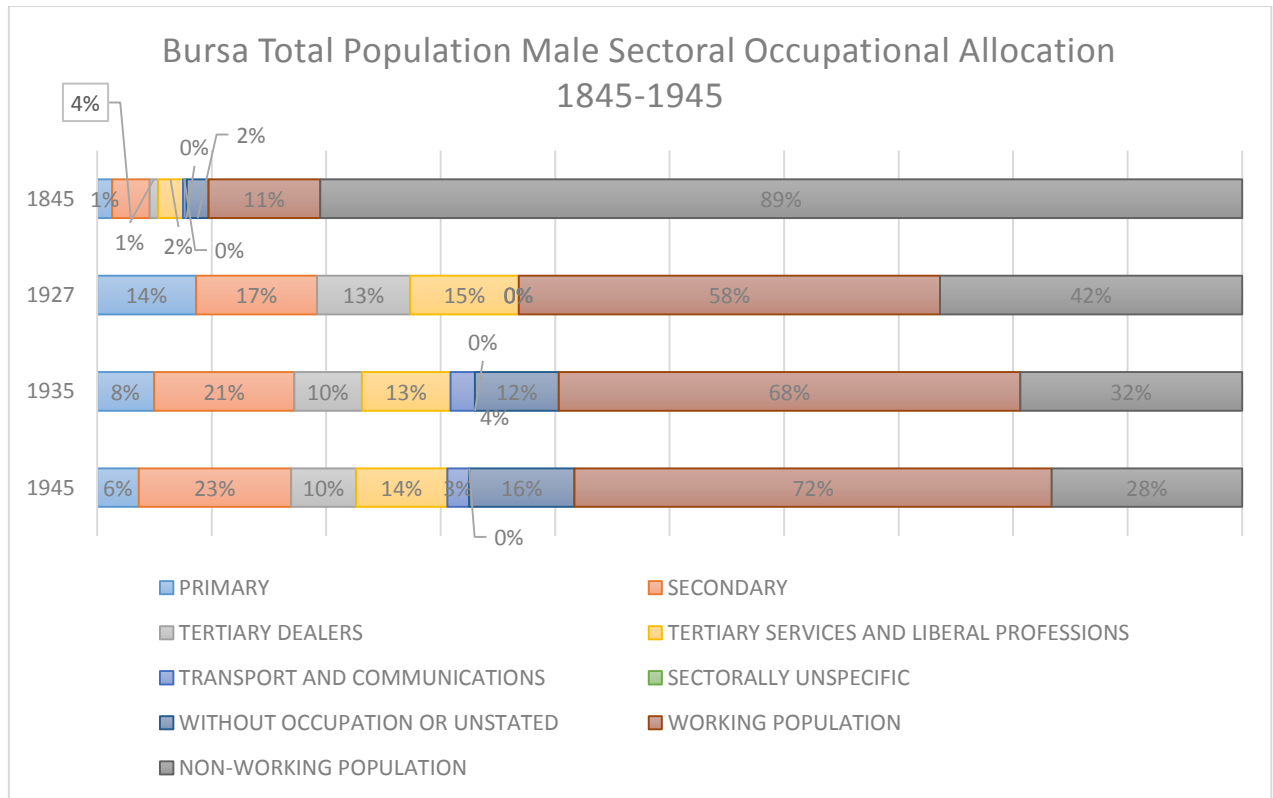


Chart 123- Bursa Working Population Male Sectoral Occupational Allocation 1845-1945

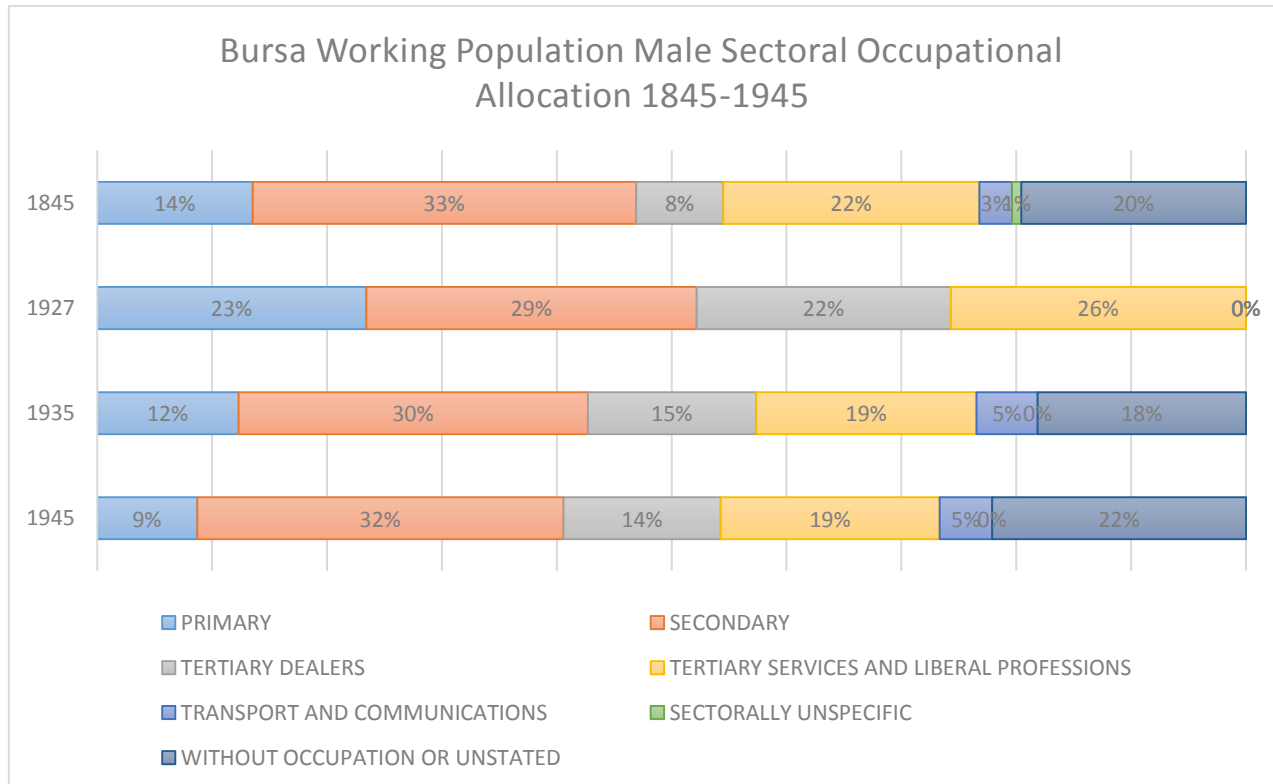


Chart 124- Bursa 1935-1945 Total Population, Both Sexes, Sectoral Occupational Shift

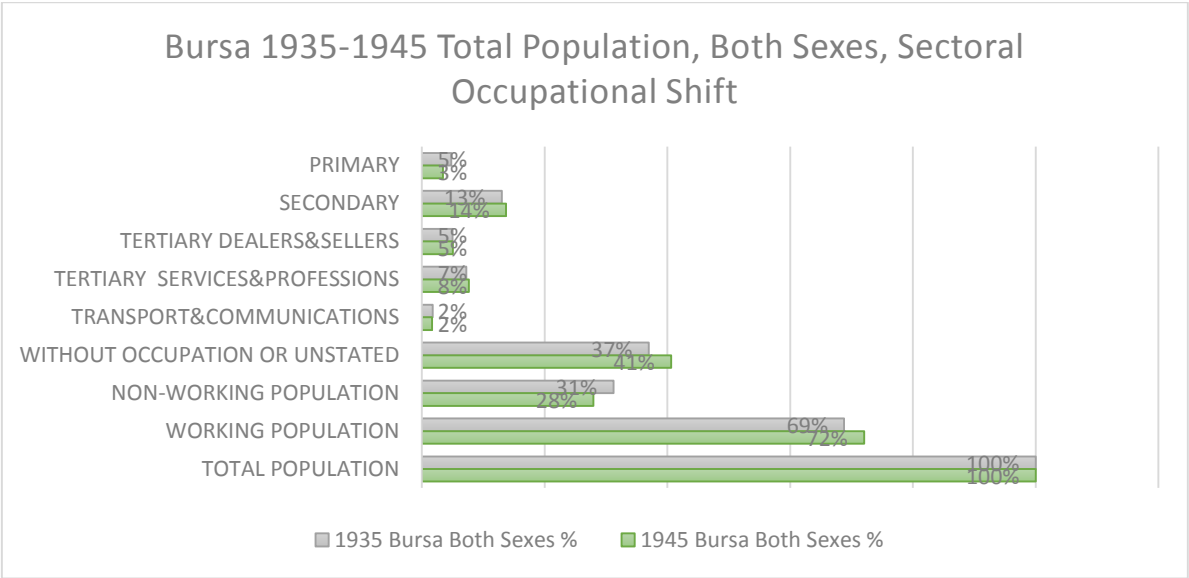


Chart 125-Bursa 1935-1945 Working Population, Both Sexes, Sectoral Occupational Shift

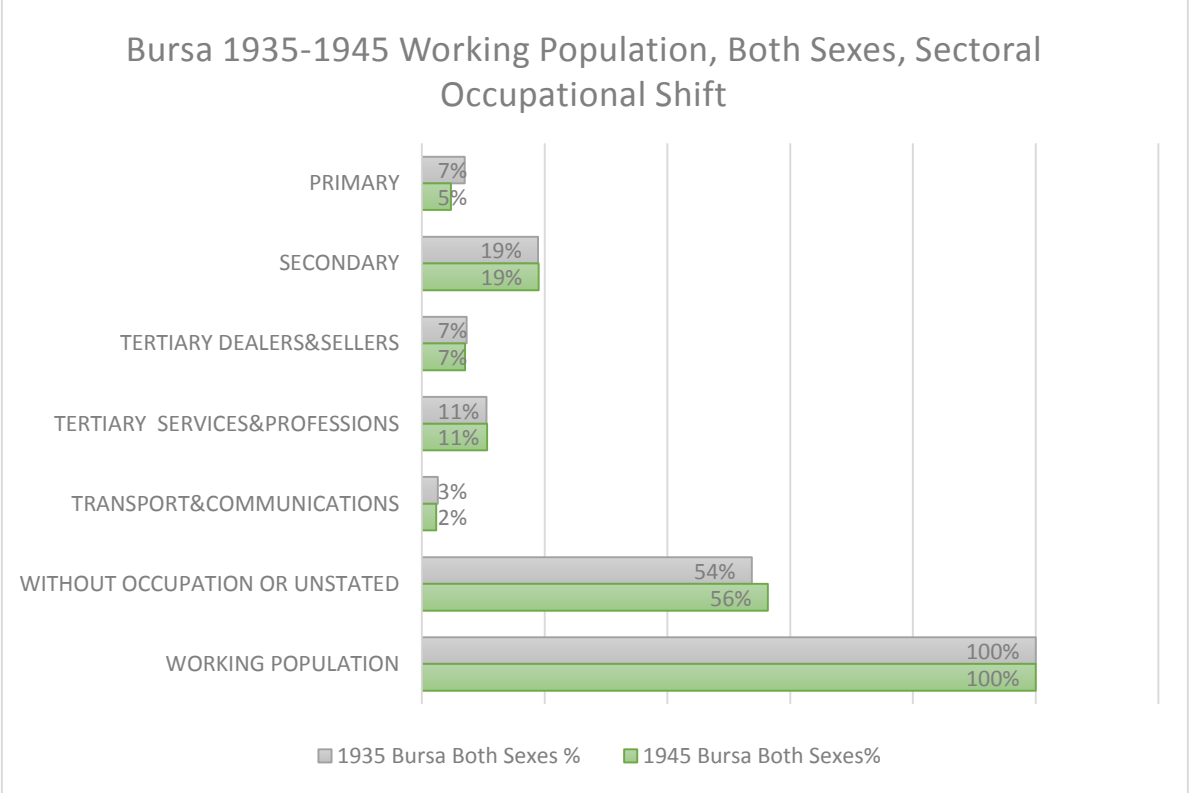


Chart 126- Bursa 1935-1945 Total Population, Males, Sectoral Occupational Shift

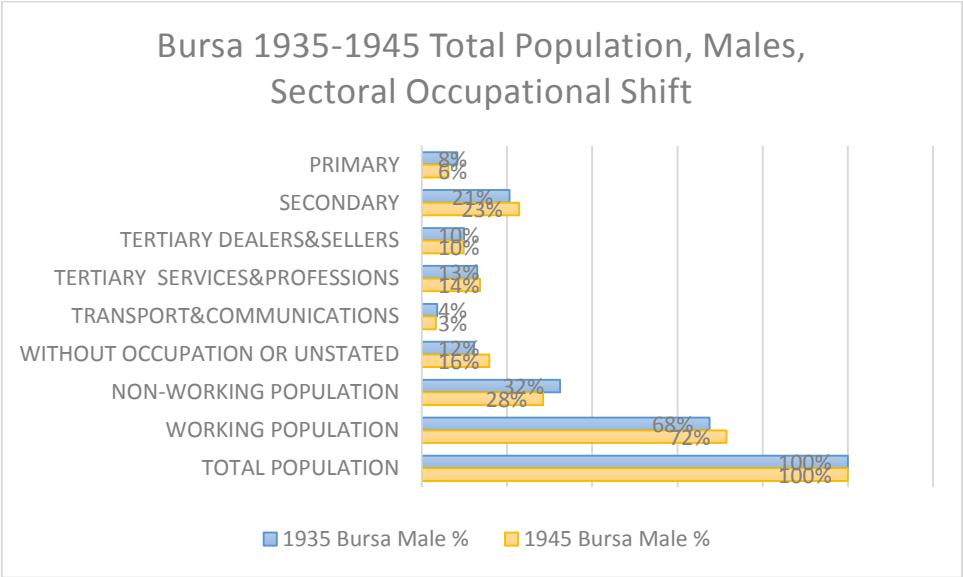


Chart 127- Bursa 1935-1945 Working Population, Males, Sectoral Occupational Shift

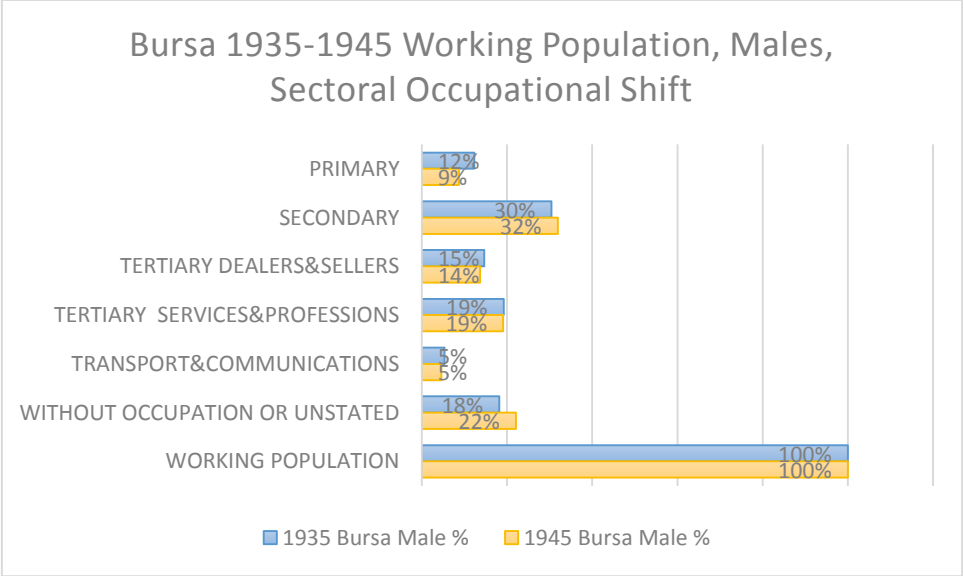


Chart 128- Bursa 1935-1945 Total Population, Females, Sectoral Occupational Shift

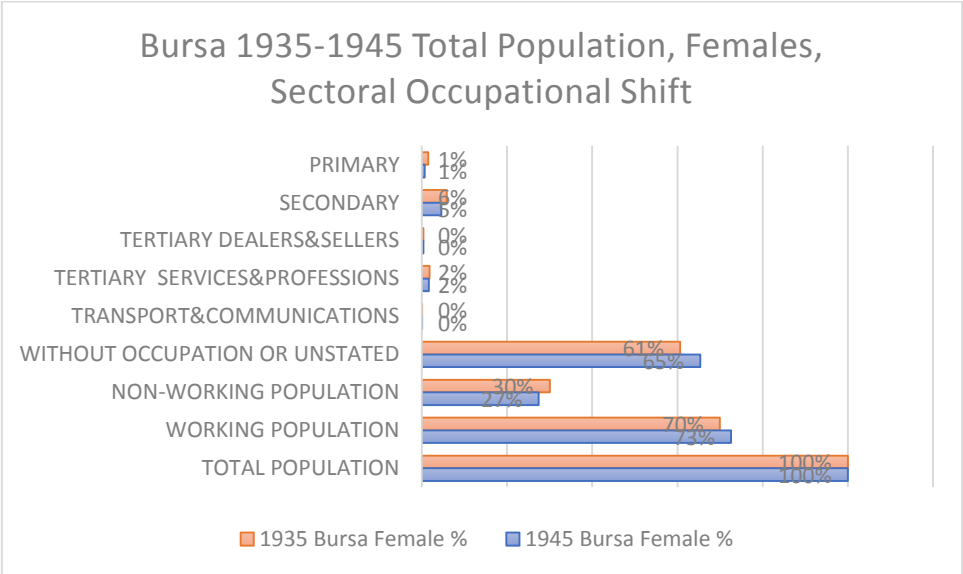
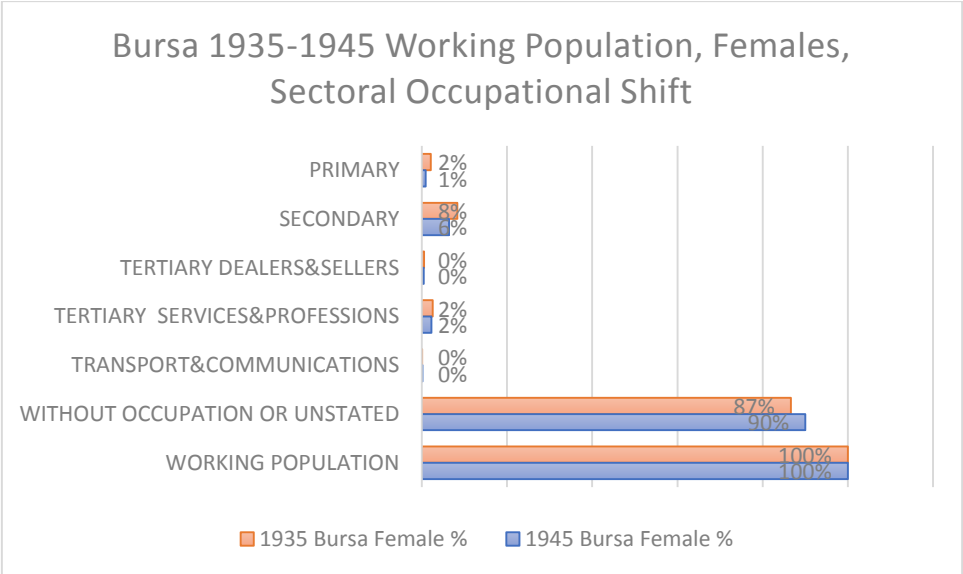


Chart 129- Bursa 1935-1945 Working Population, Females, Sectoral Occupational Shift



Summary of Charts: Bursa 1845-1945 Sectoral Occupational Allocation

Focusing more carefully on 1935-1945 period, since the census methods were more compatible, we could observe a slight increase in working population rates but meanwhile, unemployment rate also increases. Primary sector, loses its 2% share while secondary and tertiary sector shares are more or less the same. The newly joined persons to the working population gets 'without occupation or unstated' higher.

Regarding working population, we could conduct a proper analysis only for males and accordingly, our comparison in working male population indicates that while primary sector occupations loses its 3% share, this was reflected in a slight increase in secondary sector activities as well as without occupation or unstated category.

If we consider occupational transformation between 1845 and 1945 once again, we would need to first acknowledge that our options are limited by methodological and reliability differences between occupational data sources. Therefore, we could not utilize a comparison among females since throughout the 100-year period, the female total and working population rates were abruptly changing and deprives us for a proper comparison. Regarding males, the comparative perspective is not easy to take since PSTI sectors does not % 100 match with each other apart from Census 1935 and 1945.

Nevertheless, in a very general lines, we could observe an occupational transformation in Bursa, in the way that from 1845 to 1945, primary sector activities loses share in total population. At

the same time, secondary sector also seems to lose some of its share, from %33 to %21 whereas tertiary sector keeps its level around %30 throughout 1845-1945 in total population.

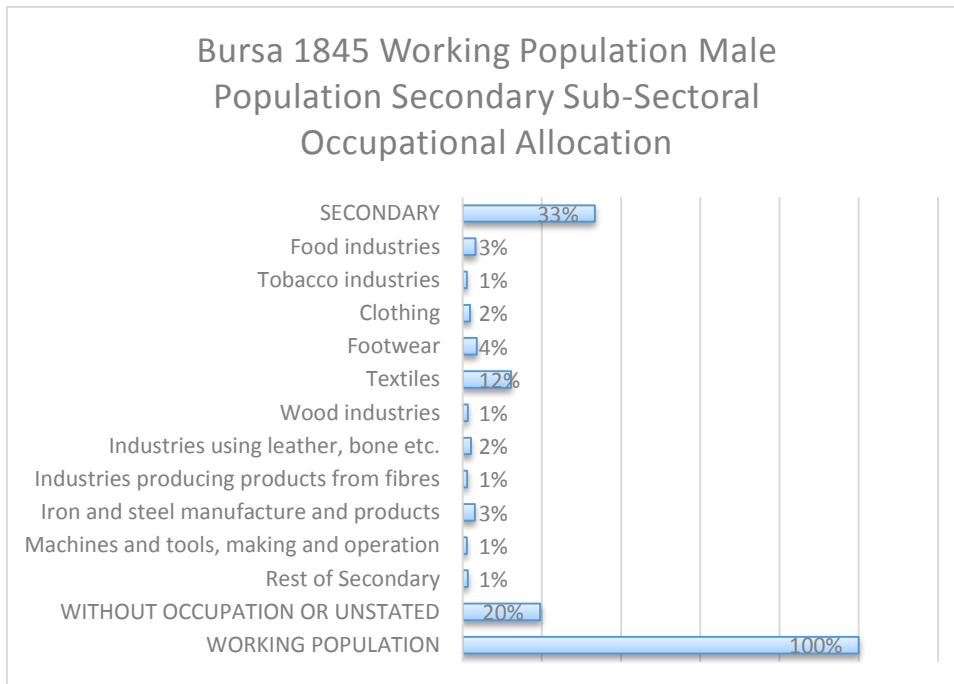
Sub-Sectoral Occupational Transformation Bursa: 1845-1945

Secondary Sub-sectoral Occupational Allocation

Table 39-Bursa 1845 Working Population, (Pre-dominantly) Male, Secondary Sub-sectoral Occupational Allocation

1845 BURSA (# numbers,% shares)	MALE #	MALE %
SECONDARY	611	33%
Other Secondary	6	0%
Food industries	60	3%
Drink industries	4	0%
Tobacco industries	19	1%
Clothing	34	2%
Footwear	66	4%
Textiles	224	12%
Wood industries	24	1%
Industries using leather, bone etc.	39	2%
Industries producing products from fibres	21	1%
Furnishing	0%	0%
Printing	4	0%
Earthenware, pottery manufacture	2	0%
Precious metals and jewelry	0%	0%
Instrument making	2	0%
Chemical, soap, adhesives, manufacture	3	0%
Iron and steel manufacture and products	57	3%
Non-ferrous metal manufacture and products	9	0%
Metal working	0	0%
Machines and tools, making and operation	19	1%
Rail transport vehicles	0	0%
Stone and mineral processing industries	1	0%
Building and construction	9	0%
Public Works	4	0%
Minor manufactures and trades	4	0%
SECTORALLY UNSPECIFIED	15	1%
WITHOUT OCCUPATION OR UNCERTAIN	358	20%
No Stated Occupation	338	18%
Uncertain Status	20	1%
WORKING POPULATION	1831	100%

Chart 130-Bursa 1845 Working Male Population Secondary Sub-Sectoral Occupational Allocation



Summary of Charts: Bursa Secondary Sub-sectoral Allocation 1845

As we have seen in the previous sub-section, regarding tax registers of 1845, in Bursa, secondary sector occupations accounts for %33 of workforce (predominantly males). If we look 1845 secondary sector sub-sectoral occupational allocation more closely, we would observe that secondary sector activities are mainly concentrated around textiles. However, the secondary sector related activities were not limited with only textiles; the range is quite large. Along with textiles, food industries, footwear and iron-steel manufacture and products sub-sectors which make up the other %30 of workforce.

Table 40- Bursa 1935 Total Population, Secondary Sub-Sectoral Occupational Allocation

BURSA 1935 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
SECONDARY	7254	2140	9394	21%	6%	13%
Mining and quarrying	14	0	14	0%	0%	0%
Clothing	1522	305	1827	4%	1%	3%
Textiles	1002	1057	2059	3%	3%	3%
Wood Industries	767	36	803	2%	0%	1%
Industries using leather, bone etc.	314	0	314	1%	0%	0%
Paper industries	89	2	91	0%	0%	0%
Chemical, Soap, Adhesives, Manufactures	33	2	35	0%	0%	0%
Iron and steel manufacture and products	677	0	677	2%	0%	1%
Machines and tools, making and operation	167	0	167	0%	0%	0%
Stone and mineral processing industries	67	0	67	0%	0%	0%
Building and Construction	654	0	654	2%	0%	1%
Electricity generation and supply	33	0	33	0%	0%	0%
Factory Labourer	774	571	1345	2%	2%	2%
Food/Drink/Tobacco industries	1141	167	1308	3%	0%	2%
WITHOUT OCCUPATION OR UNSTATED	4325	22358	26683	12%	61%	37%
WORKING POPULATION	23850	25808	49658	68%	70%	69%
NON-WORKING POPULATION	11464	11065	22529	32%	30%	31%
TOTAL POPULATION	35314	36873	72187	100%	100%	100%

Chart 131- Bursa 1935 Total Population, Sub-Sectoral Occupational Allocation

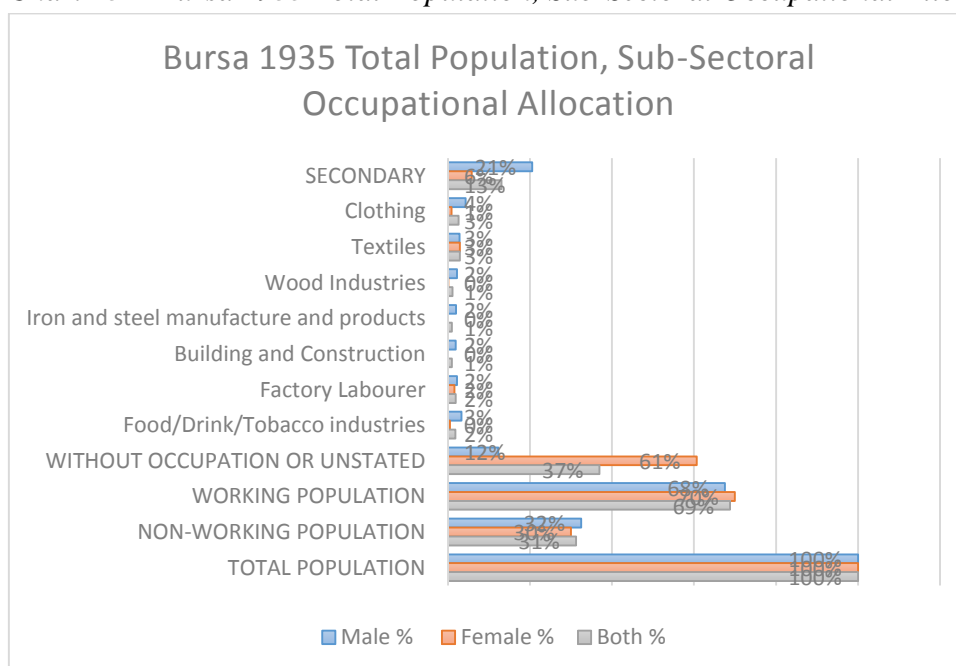


Chart 132-Bursa 1935 Working Population, Sub-sectoral Occupational Allocation

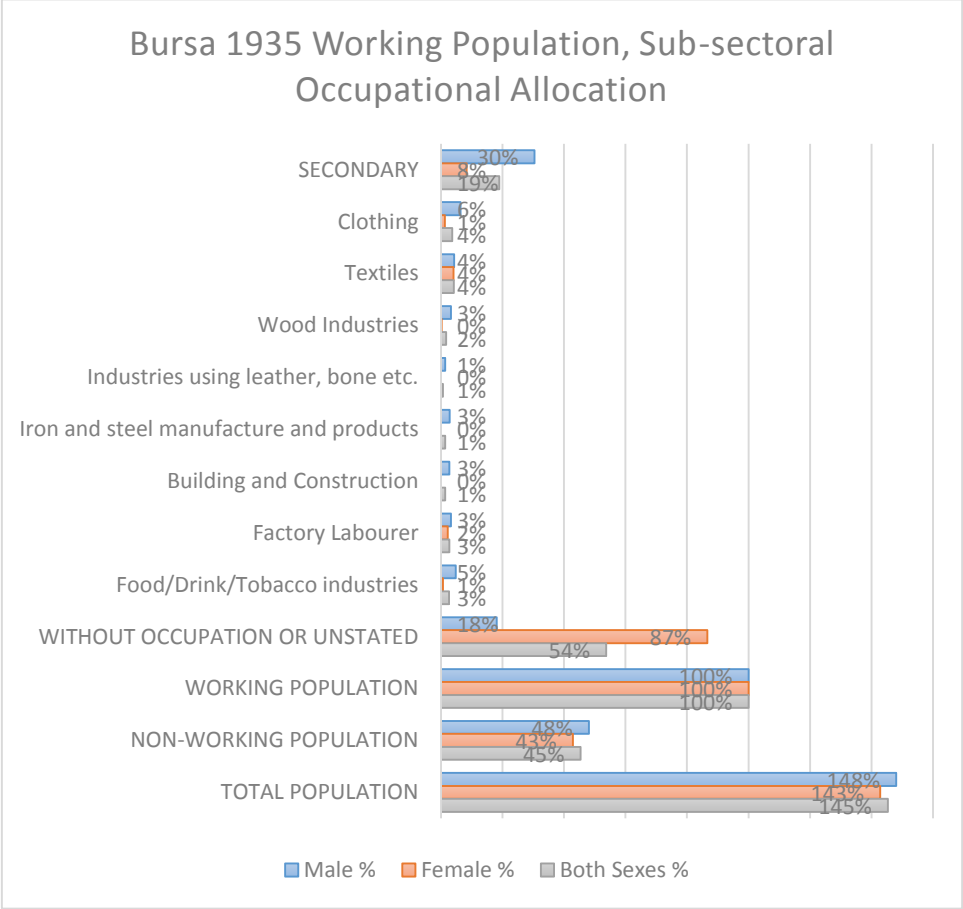
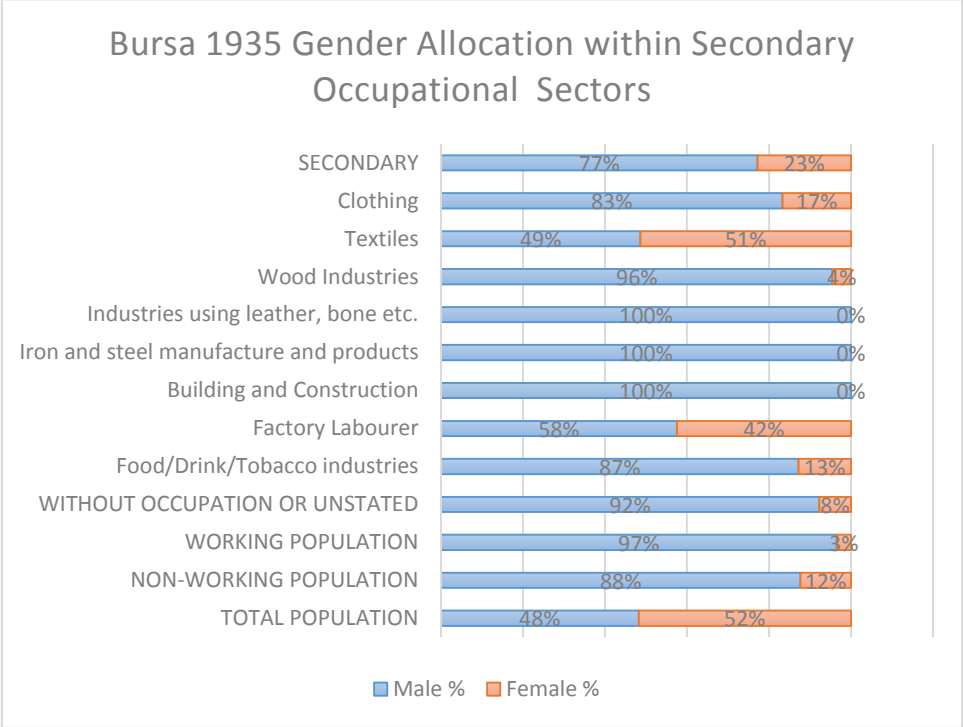


Chart 133- Bursa 1935 Gender Allocation within Secondary Occupational Sectors



Summary of Charts: Bursa 1935 Secondary Sub-sectoral Allocation

Regarding 1935, we must indicate that the amount of females under the title *without occupation or un stated* is abnormally high therefore, we would like to limit our comments with males. The occupational dispersion of secondary sector activities of the working population are concentrated around, small-scale or ‘light industries’ like textiles and clothing. The latter signifies for a more derivative manufacturing activity where textiles is more or less related with working on yarn or fibres whereas clothing includes more sewing related activities, nevertheless, the rising share clothing from 1845 is worth considering. Apart from these heavy industry related activities as stone and mineral processing industries, one should not forget the food/drink/tobacco industries which could be an indication of state attempts to build a domestic industry which could provide the basic consumption goods. Building and construction occupations are high in shares which means the urban city economy is lively and active.

Gender allocation in Bursa 1935 was hugely one-sided in secondary sub-sectoral occupations. Males are dominant in almost every sub-sector and only in textiles; the gender shares are even. This shows us that very few females has a 'stated' occupation and many of them are with textiles occupation even in this setting, their number could match with males in textiles. Bursa working males in 1935 were dispersed in many secondary sub-sectoral occupational activities.

Table 41- Bursa 1945 Total Population, Secondary Sub-Sectoral Occupational Allocation

BURSA 1945 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
SECONDARY	9788	1975	11763	23%	5%	14%
Mining and quarrying	14	0	14	0%	0%	0%
Clothing	2160	184	2344	5%	0%	3%
Textiles	2623	1537	4160	6%	4%	5%
Wood Industries	678	0	678	2%	0%	1%
Industries using leather, bone etc.	409	0	409	1%	0%	0%
Paper industries	86	0	86	0%	0%	0%
Chemical, Soap, Adhesives, Manufactures	22	0	22	0%	0%	0%
Iron and steel manufacture and products	840	6	846	2%	0%	1%
Machines and tools, making and operation	807	0	807	2%	0%	1%
Stone and mineral processing industries	76	0	76	0%	0%	0%
Building and Construction	459	0	459	1%	0%	1%
Electricity generation and supply	73	0	73	0%	0%	0%
Factory Labourer	479	148	627	1%	0%	1%
Food/Drink/Tobacco industries	1062	100	1162	2%	0%	1%
WITHOUT OCCUPATION OR UNSTATED	6781	28094	34875	16%	65%	41%
NO OR UNKNOWN PROFESSION	6781	28094	34875	16%	65%	41%
WORKING POPULATION	30697	31208	61905	72%	73%	72%
NON-WORKING POPULATION	12230	11784	24014	28%	27%	28%
TOTAL POPULATION	42927	42992	85919	100%	100%	100%

Chart 134-Bursa 1945-Total Population, Secondary Sub-Sectoral Occupational Allocation

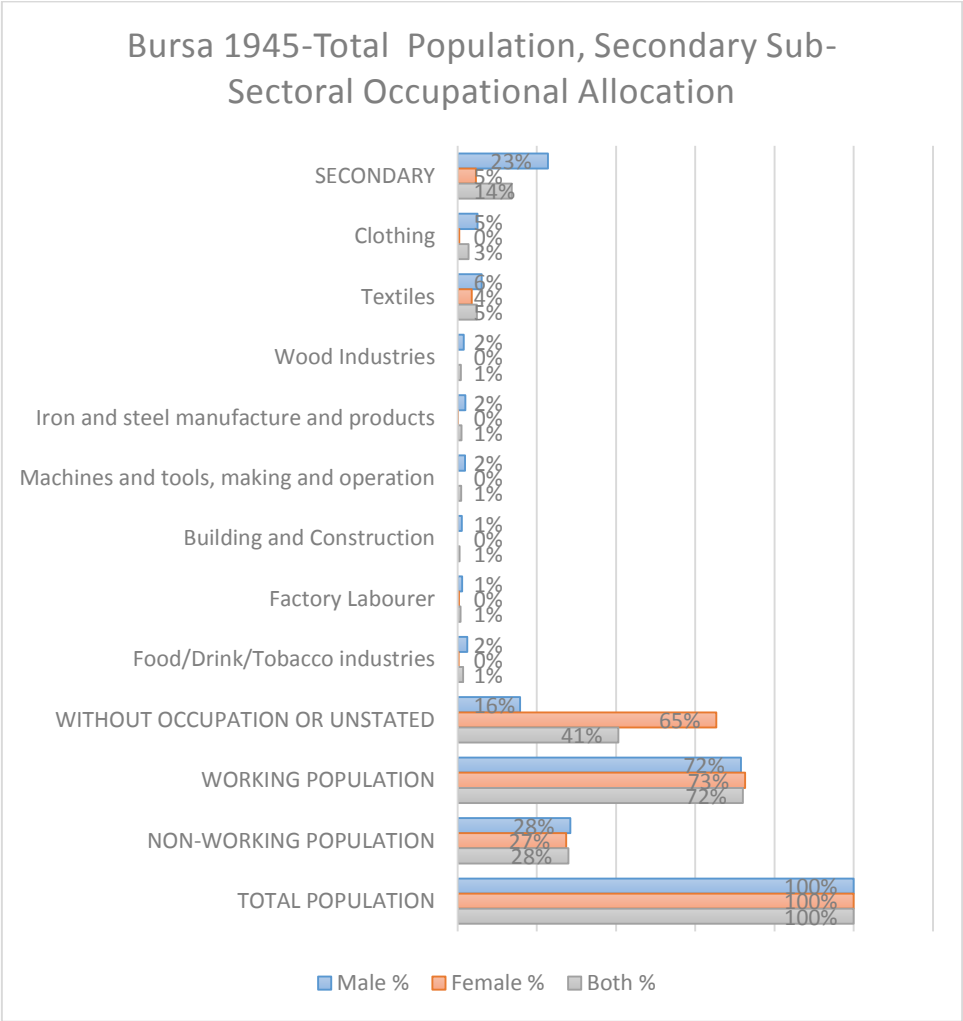


Chart 135- Bursa 1945 Working Population, Secondary Sub-Sectoral Occupational Allocation

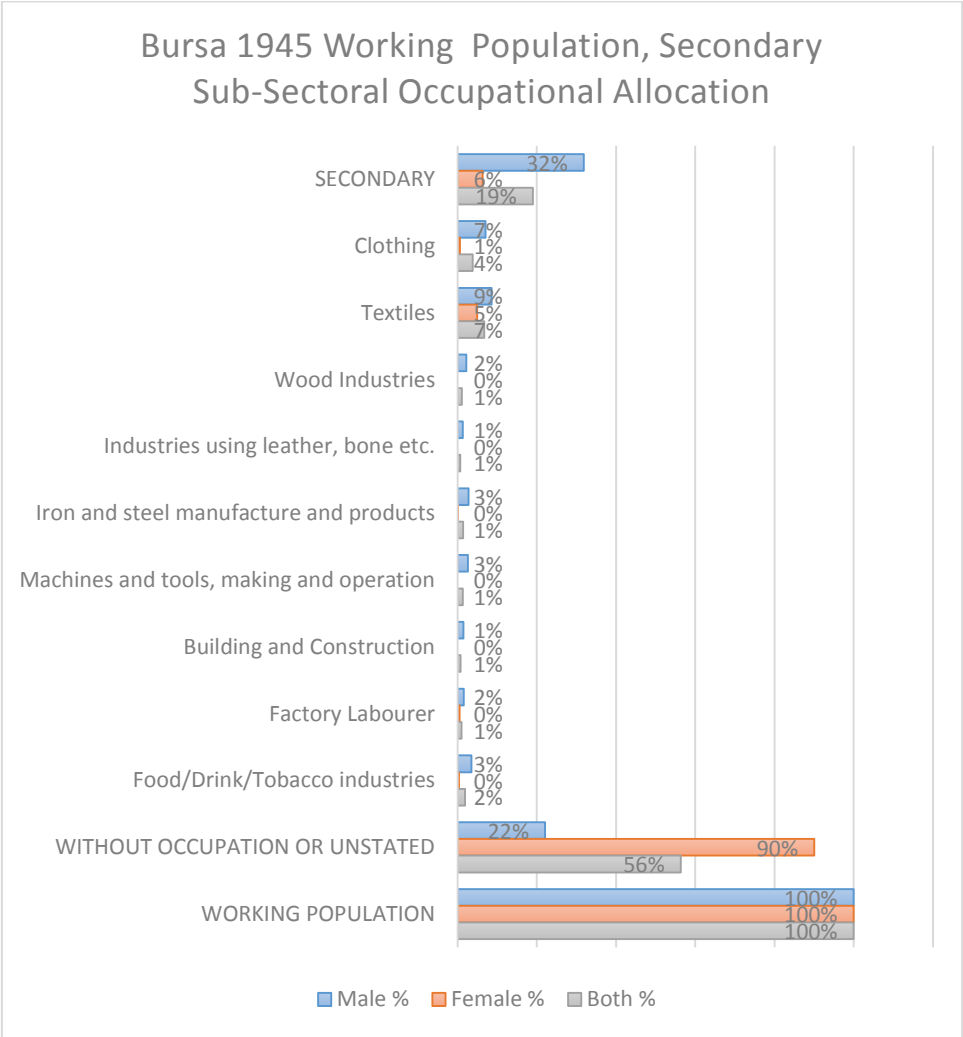
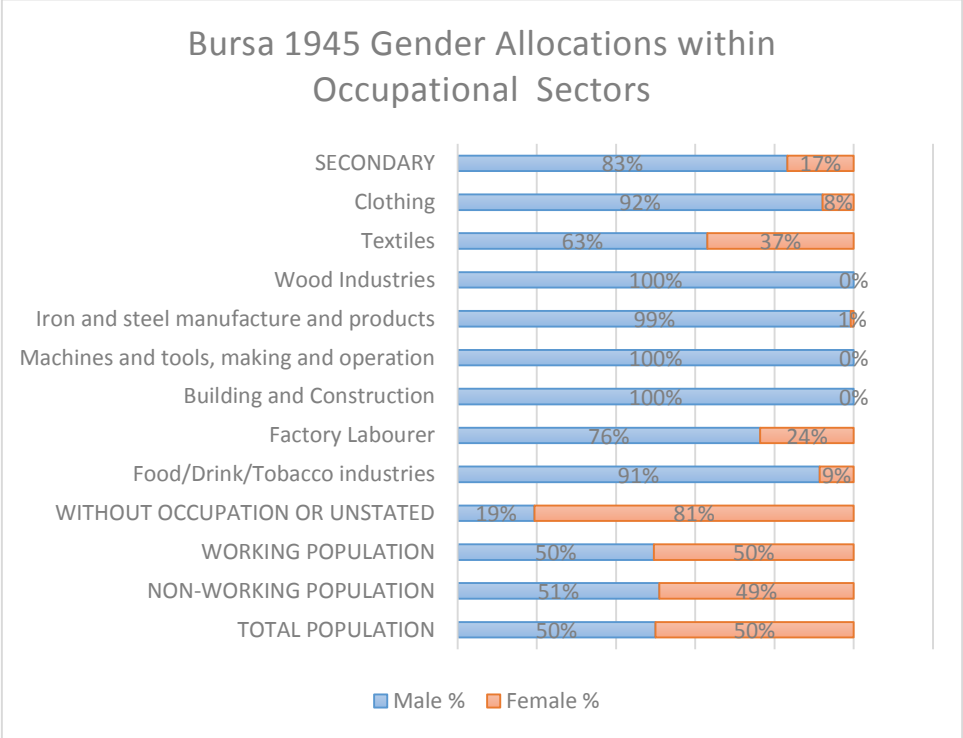


Chart 136- Bursa 1945 Gender Allocation within Occupational Sectors



Summary of Charts: Bursa 1945 Secondary Sub-sectoral Occupational Allocation

When we come to 1945, we would notice that regarding the secondary sub-sectoral occupational allocations, not much have changed. Females have a higher rate of having a ‘stated’ occupation and they are more densely concentrated within textile sub-sector compared to 1935.

Working population occupational dispersion tells us that both among males and females, the occupational concentration is on clothing and textiles while the latter has a higher share for both gender.

Gender allocation in Bursa 1945 tells us that males having a greater dominance in gender shares among leading secondary sub-sectoral activities, including clothing and textiles.

General Outlook: Bursa 1845-1945 Secondary Sub-sectoral Occupational Shift

Chart 137-Bursa Total Male Population 1845-1945 Secondary Sub-sectoral Occupational Shift

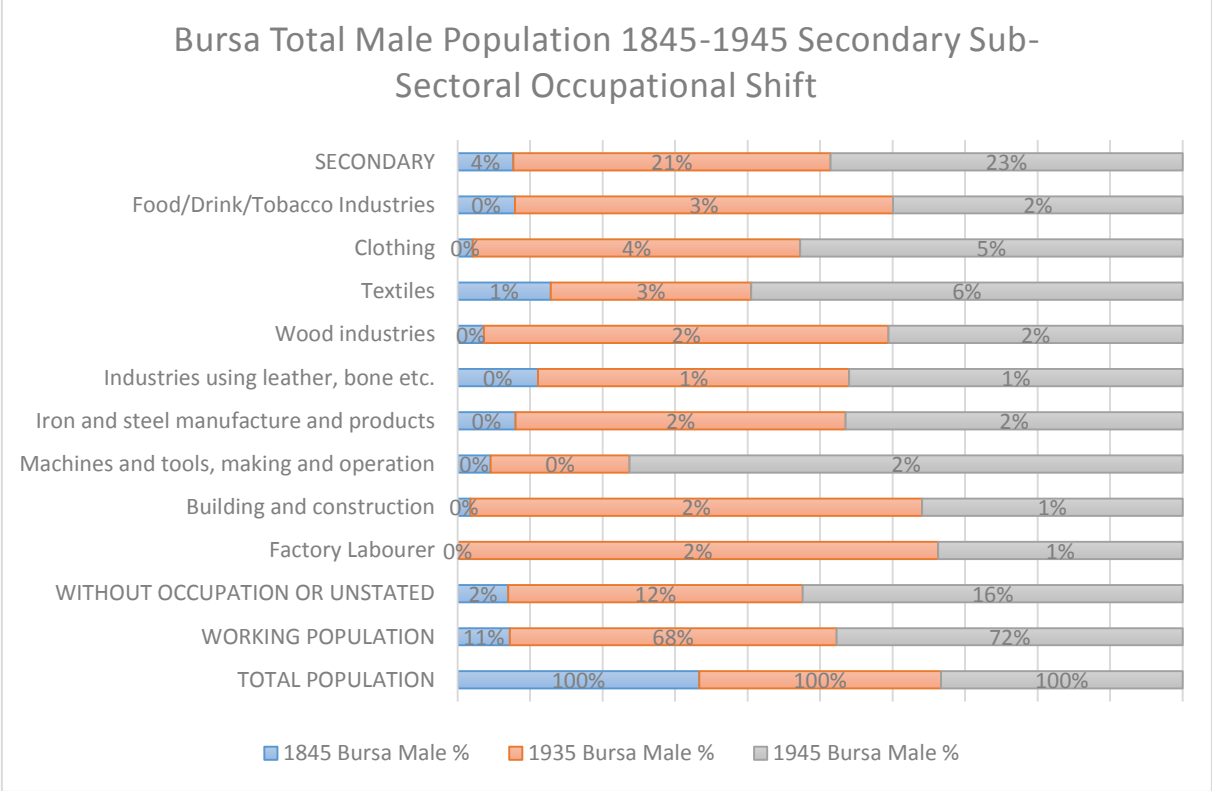


Chart 138-Bursa Total Male Population 1845-1945 Secondary Sub-Sectoral Occupational Shift

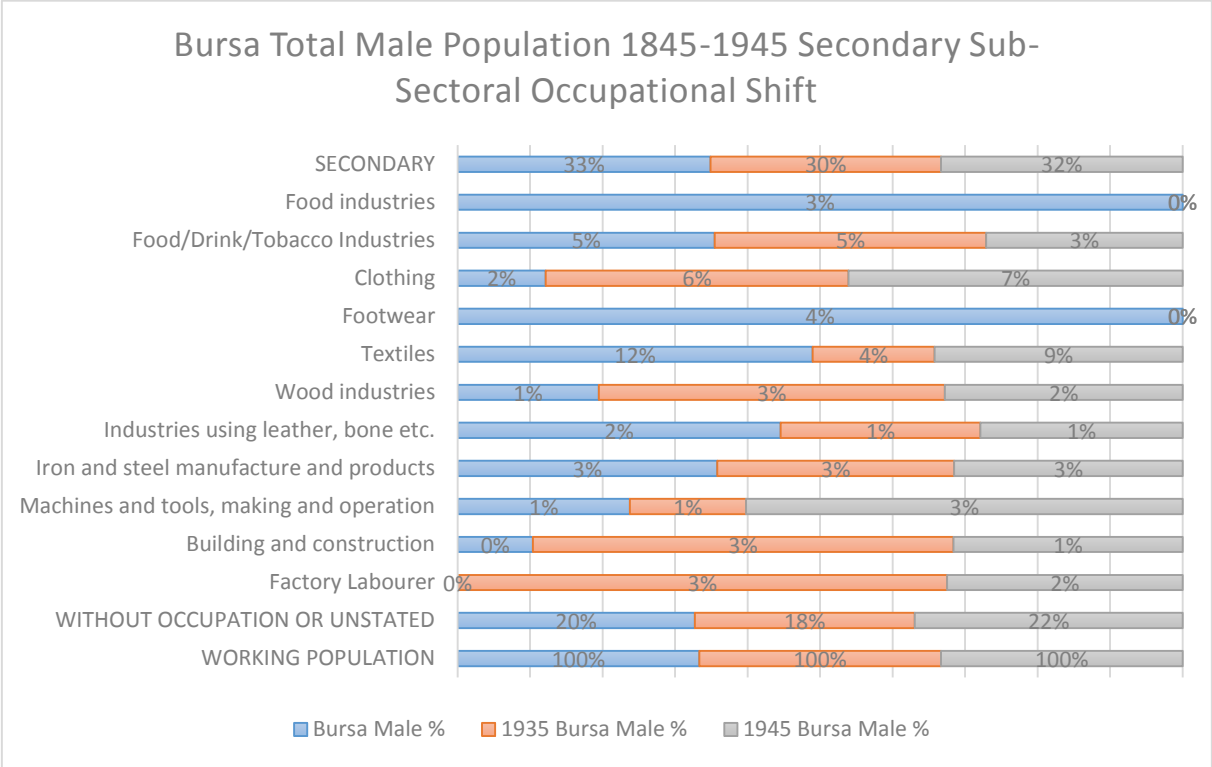


Chart 139-Bursa 1935-1945 Total Population, Both Sexes, Secondary Sub-Sectoral Occupational Shift

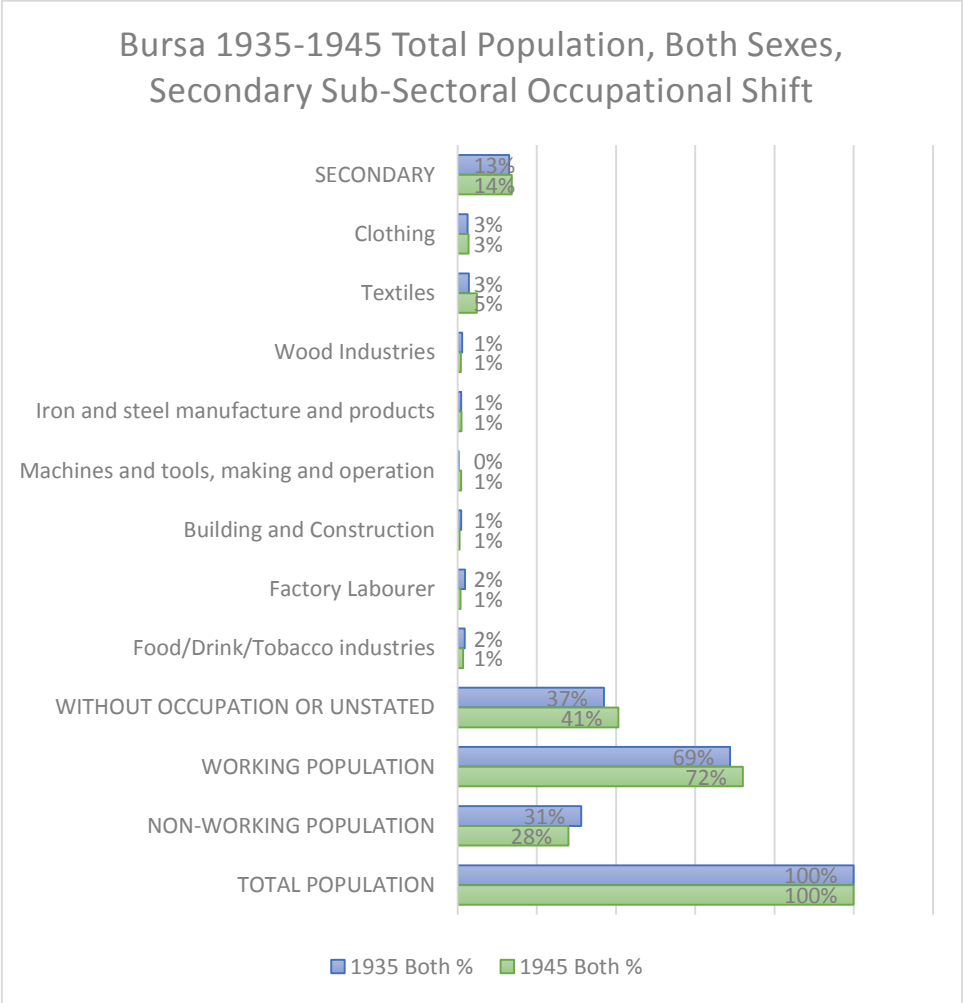


Chart 140- Bursa 1935-1945 Working Population, Both Sexes, Secondary Sub-Sectoral Occupational Shift

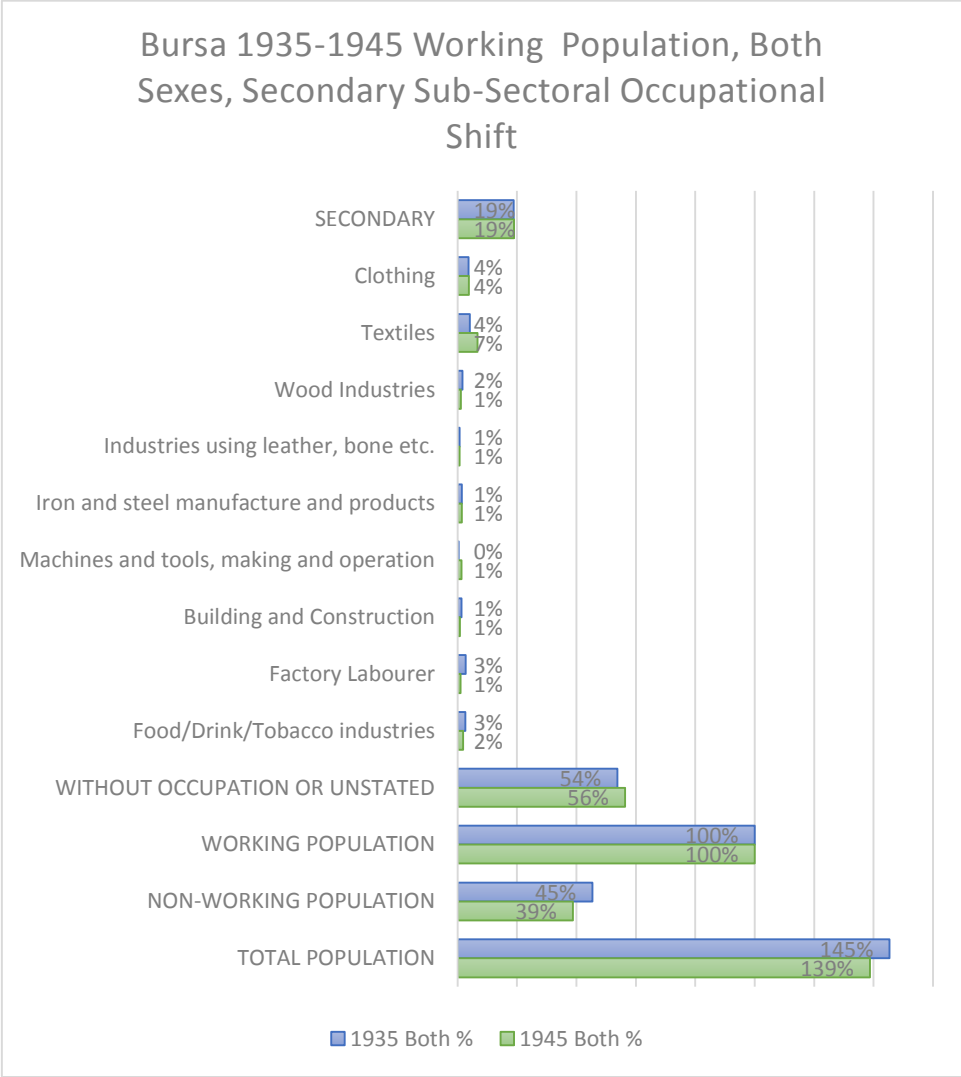


Chart 141- Bursa 1935-1945 Total Population, Males, Secondary Sub-Sectoral Occupational Shift

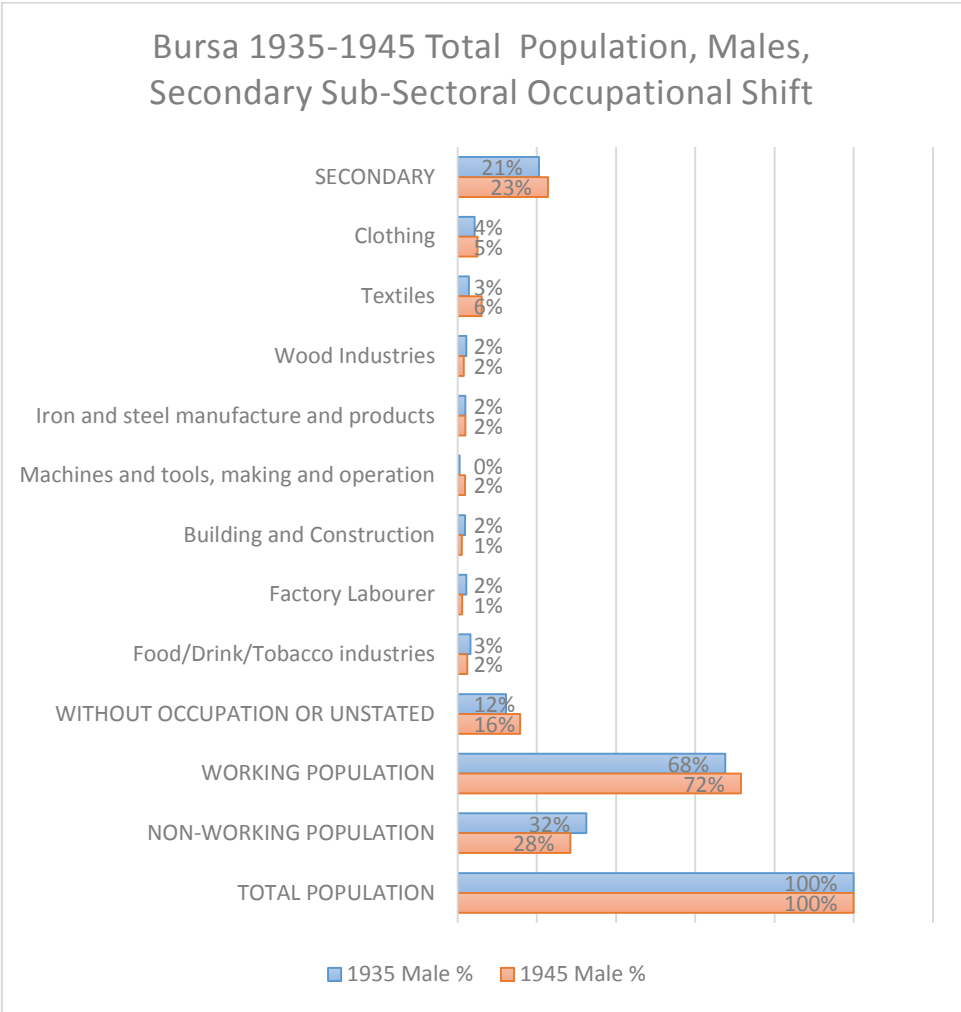


Chart 142- Bursa 1935-194 Working Population, Males, Secondary Sub-Sectoral Occupational Shift

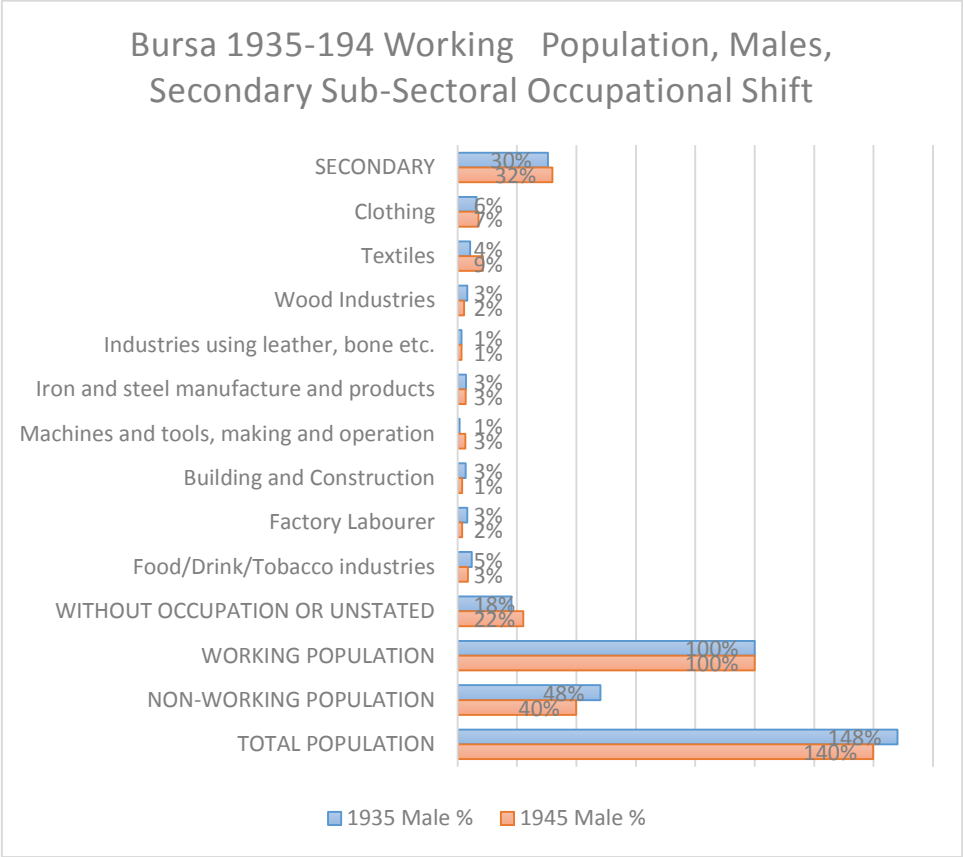


Chart 143- Bursa 1935-1945 Working Population, Females, Secondary Sub-Sectoral Occupational Shift

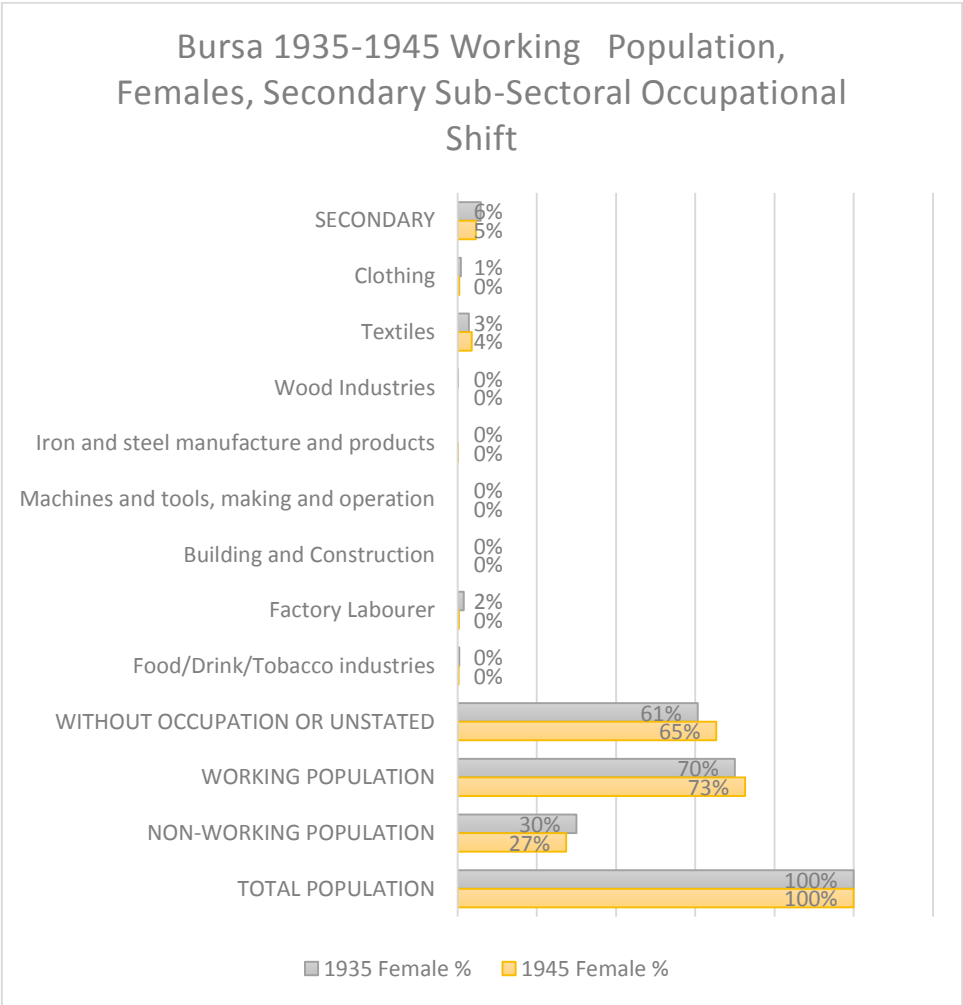
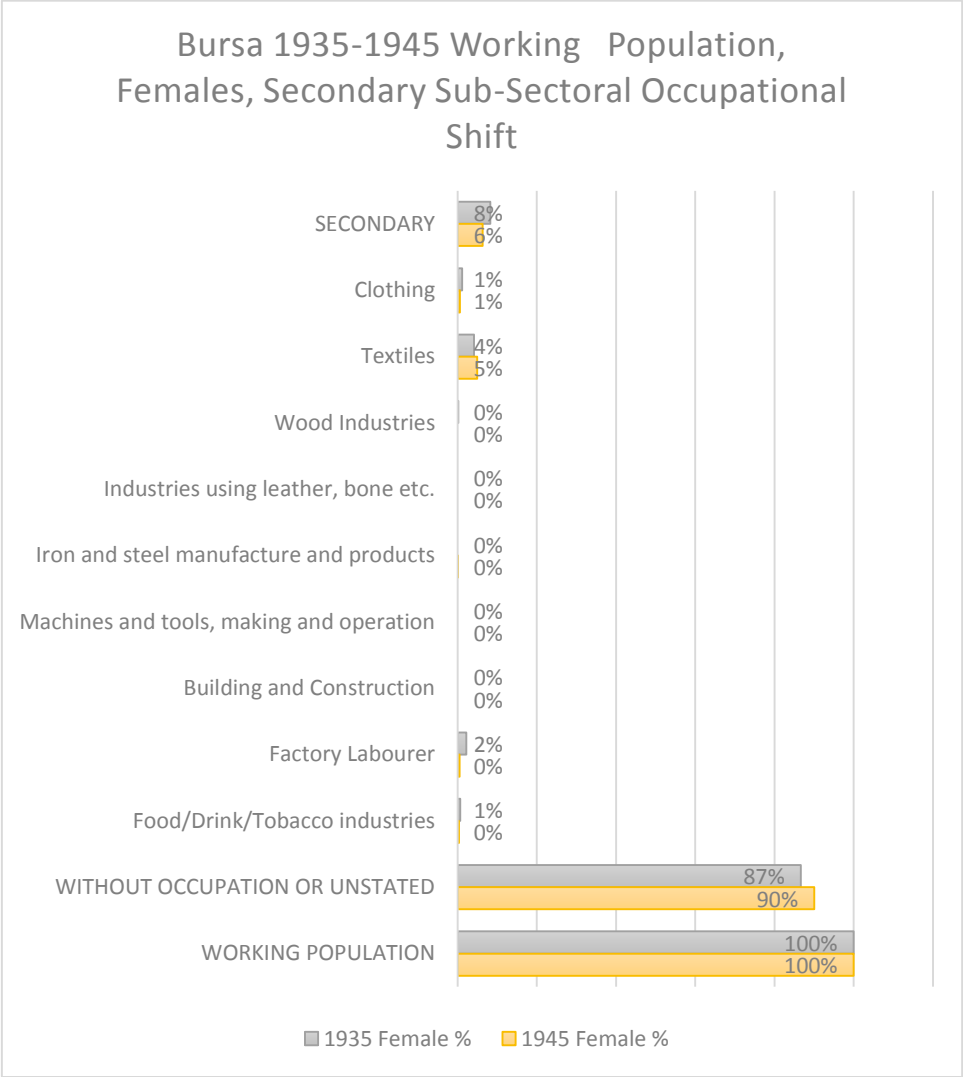


Chart 144- Bursa 1935-1945 Working Population, Females, Secondary Sub-Sectoral Occupational Shift



Summary of Charts: Bursa 1845-1945 Sectoral Occupational Allocation

Tertiary Sub-sectoral Occupational Allocation

Table 42-Bursa 1845 Total Population Tertiary Sub-sectoral Occupational Allocation

BURSA 1845 (# numbers,% shares)	MALE #	MALE %
TERTIARY	599	33%
TERTIARY DEALERS	87	5%
Rest of Tertiary Dealers	14	1%
Dealers in food	6	0%
Dealers in live animals	4	0%
Dealers in clothing and clothing accessories	43	2%
Dealers in textiles and products	14	1%
Fuel dealers	0	0%
Dealers in iron and steel, and iron and steel products	6	0%
TERTIARY SELLERS	51	3%
Sellers of food	17	1%
Sellers of clothing and clothing accessories	1	0%
Sellers of printed products	12	1%
Small traders	21	1%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	408	22%
Food, drink and accommodation services	22	1%
Entertainment	5	0%
Miscellaneous service industries	79	4%
Domestic service	83	5%
Financial services and professions	10	1%
Commercial and administrative services	28	2%
Professions	94	5%
Professional support	37	2%
Local government service	35	2%
National government service	6	0%
Armed forces	7	0%
Owners, possessors of capital	2	0%
TRANSPORT AND COMMUNICATION	52	3%
Other Transport and Communication	16	1%
Road transport (animal power)	35	2%
Sea transport	1	0%
Communications	0	0%
SECTORALLY UNSPECIFIC	15	1%
WITHOUT OR NO STATED OCCUPATION	358	20%
TOTAL POPULATION	1831	100%

Chart 145- Bursa 1845 Total Population Tertiary Sectoral Occupational Allocation

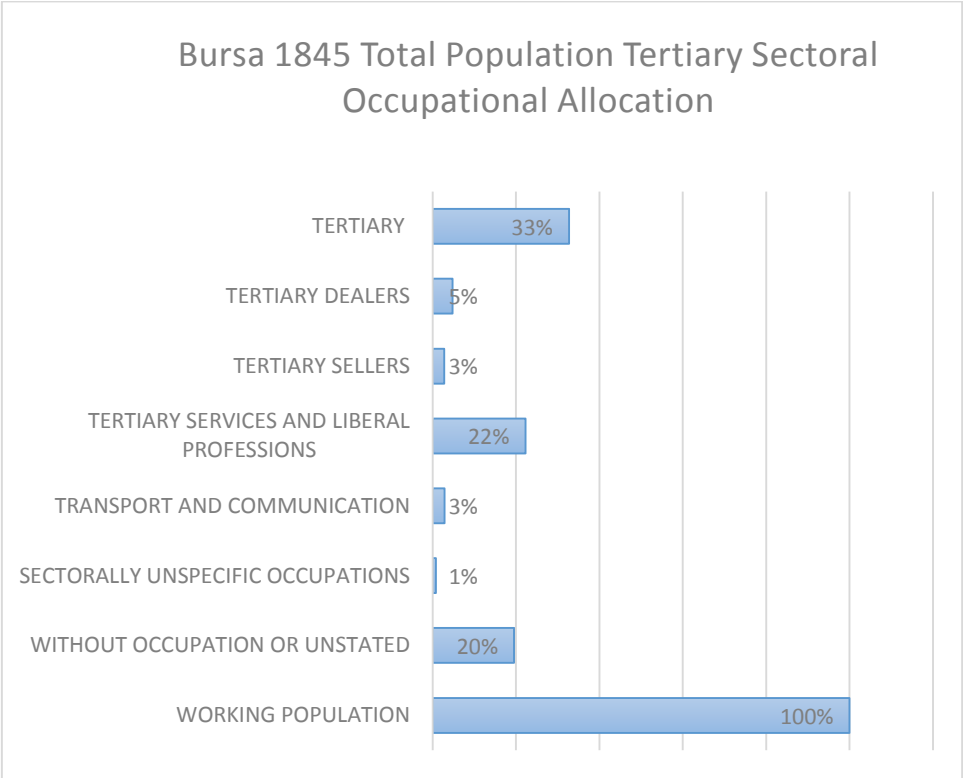
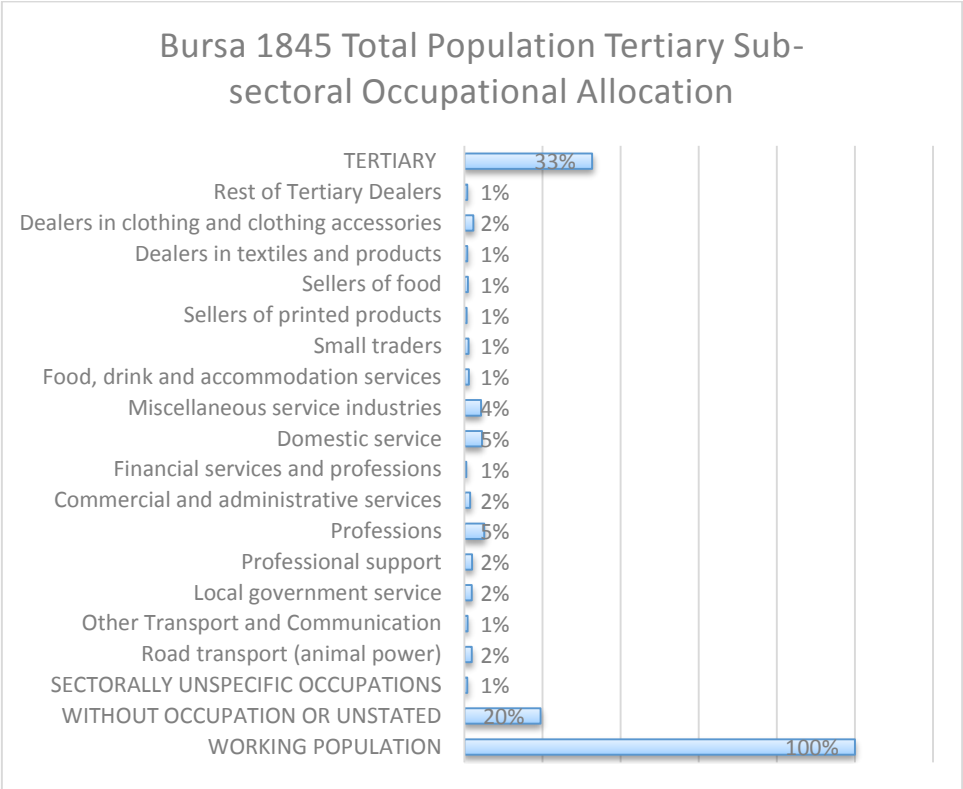


Chart 146- Bursa 1845 Total Population Tertiary Sectoral Occupational Allocation



Summary of Charts: Bursa 1845 Tertiary Sub-sectoral Occupation.

As we have seen in the previous sub-section, according to 1845 tax registers, tertiary sector has a considerable share of %30 among working population. This was a remarkably high percentage and needs further evaluation.

When we look at sub-sectoral breakdown of tertiary sector allocations, we would observe the tertiary services and profession has the greatest weight in tertiary sector. This was due to prominent roles of domestic service as well as liberal professions play within tertiary sector in the city of Bursa. Secondly, tertiary dealers, especially dealers in clothing and clothing accessories also occupy a remarkable account within tertiary sector sub-sectoral occupations.

Table 43- Bursa 1935 Total Population, Tertiary Sub-Sectoral Occupational Allocation

BURSA 1935 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %	MALE %	FEMALE %
TERTIARY	9336	778	10114	26%	2%	14%	92%	8%
TERTIARY DEALERS&SELLERS	3490	125	3615	10%	0%	5%	97%	3%
Commerce	3490	125	3615	10%	0%	5%	97%	3%
TERTIARY services & professions	4575	643	5218	13%	2%	7%	88%	12%
Private Services	221	237	458	1%	1%	1%	48%	52%
Administrative and Public Services, Liberal Professions	4354	406	4760	12%	1%	7%	91%	9%
TRANSPORT&COMMUNICATIONS	1271	10	1281	4%	0%	2%	99%	1%
Communication and Transport	1271	10	1281	4%	0%	2%	99%	1%
WITHOUT OCCUPATION OR UNSTATED	4325	22358	26683	12%	61%	37%	16%	84%
No or Unknown Profession	4325	22358	26683	12%	61%	37%	16%	84%
WORKING POPULATION	23850	25808	49658	68%	70%	69%	48%	52%
NON-WORKING POPULATION	11464	11065	22529	32%	30%	31%	51%	49%
TOTAL POPULATION	35314	36873	72187	100%	100%	100%	49%	51%

Chart 147- Bursa 1935 Total Population, Tertiary Sectoral Occupational Allocation

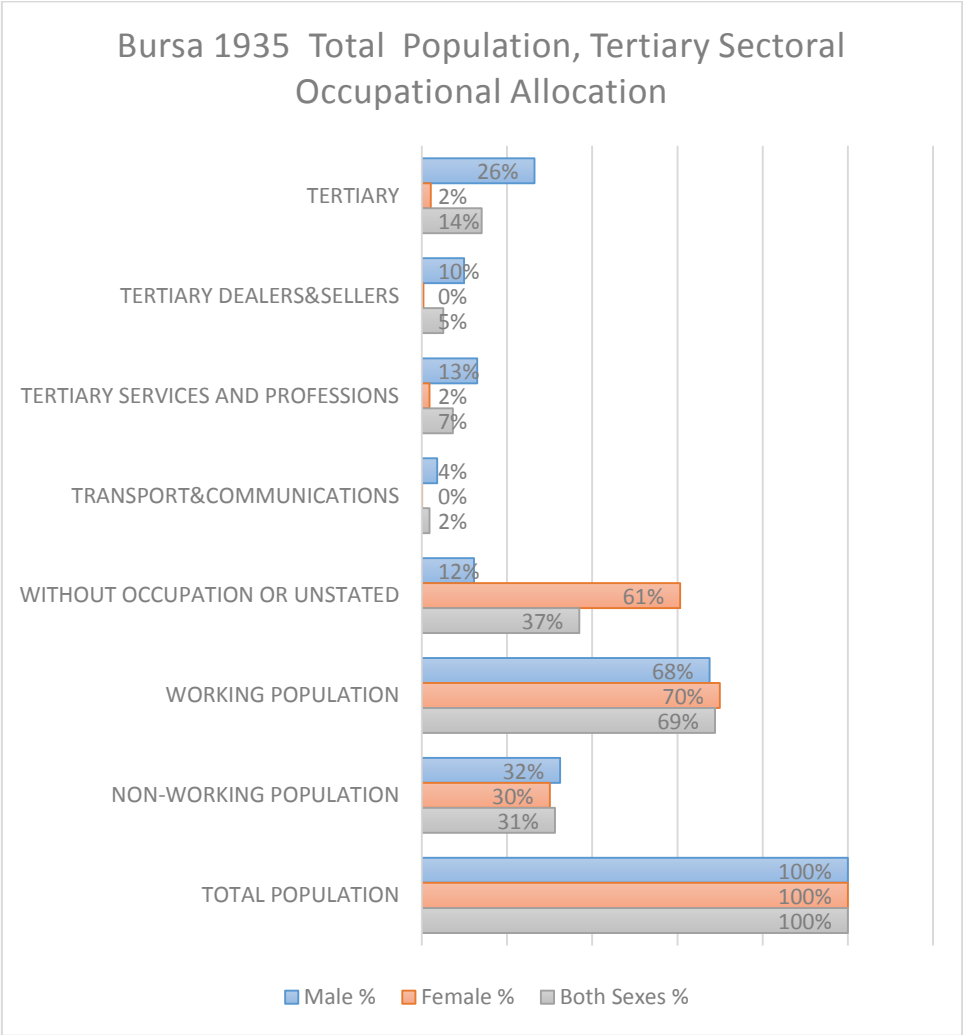


Chart 148- Bursa 1935 Total Population, Tertiary Sub-Sectoral Occupational Allocation

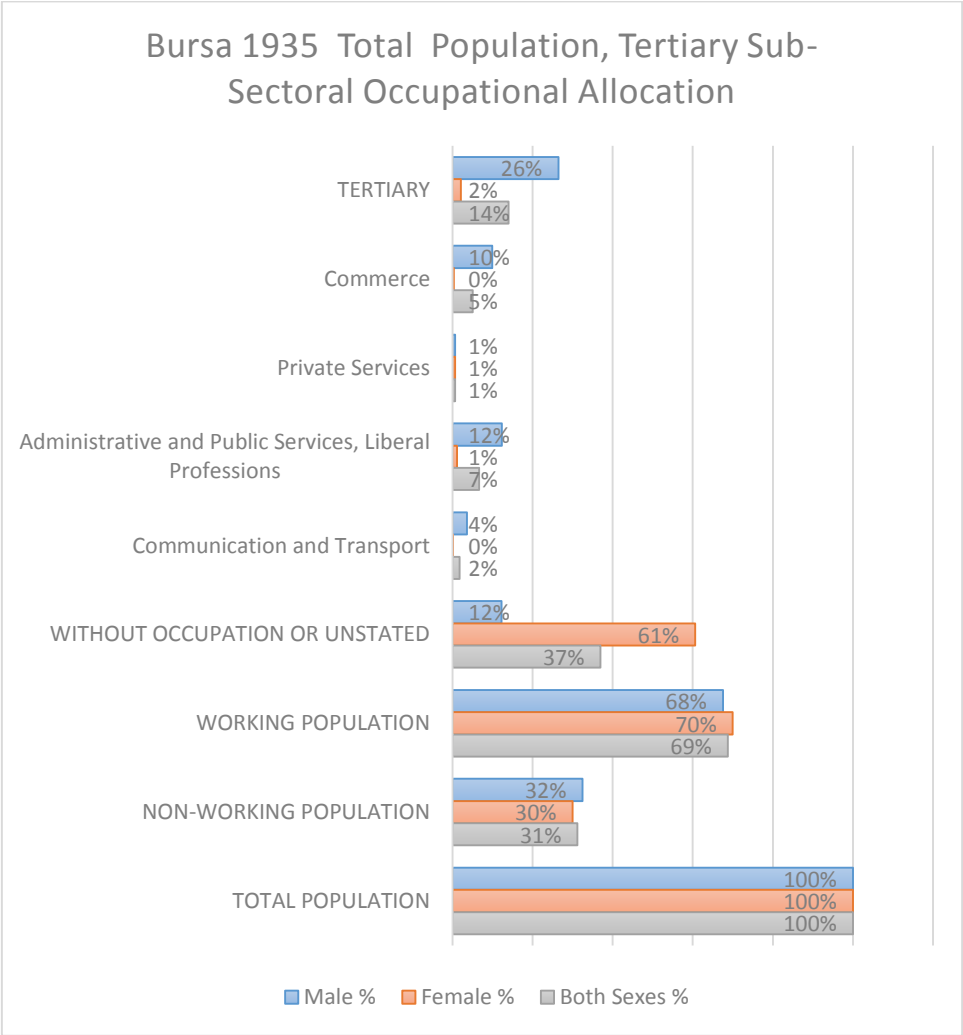


Chart 149- Bursa 1935 Working Population, Tertiary Sectoral Occupational Allocation

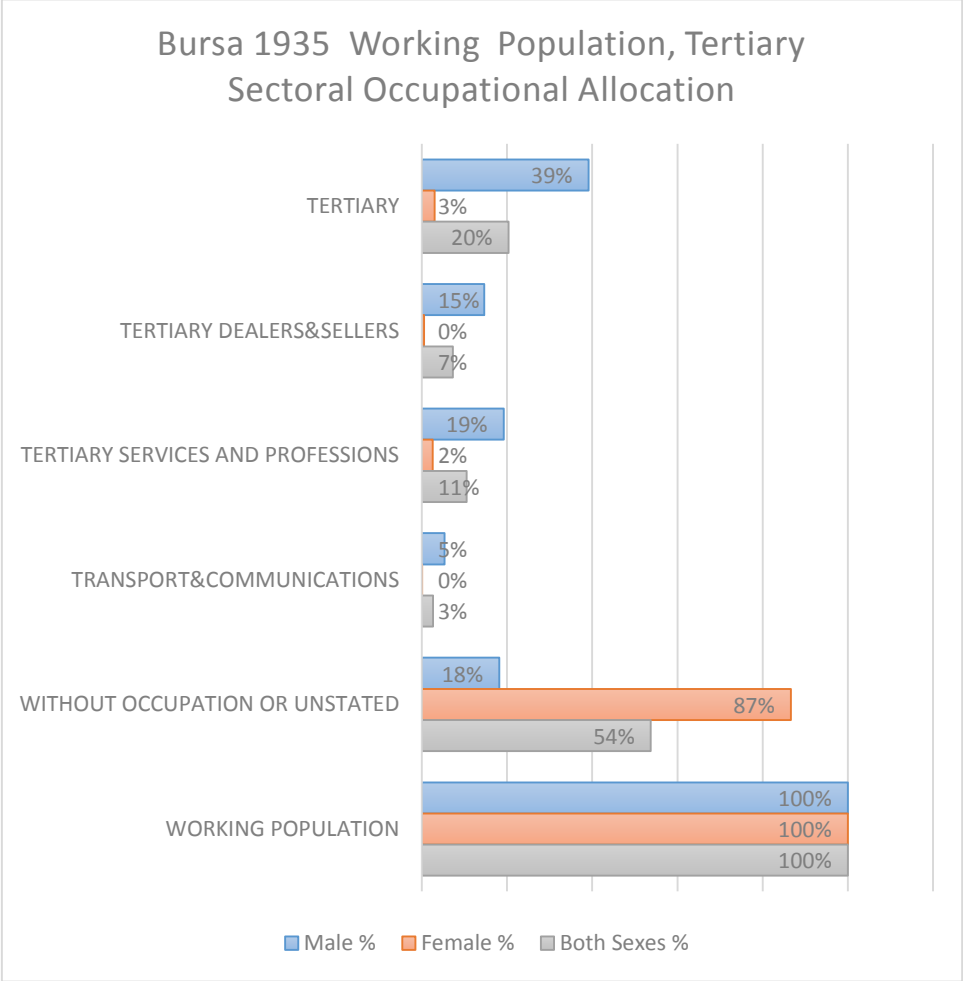


Chart 150- Bursa 1935 Working Population, Tertiary Sub-Sectoral Occupational Allocation

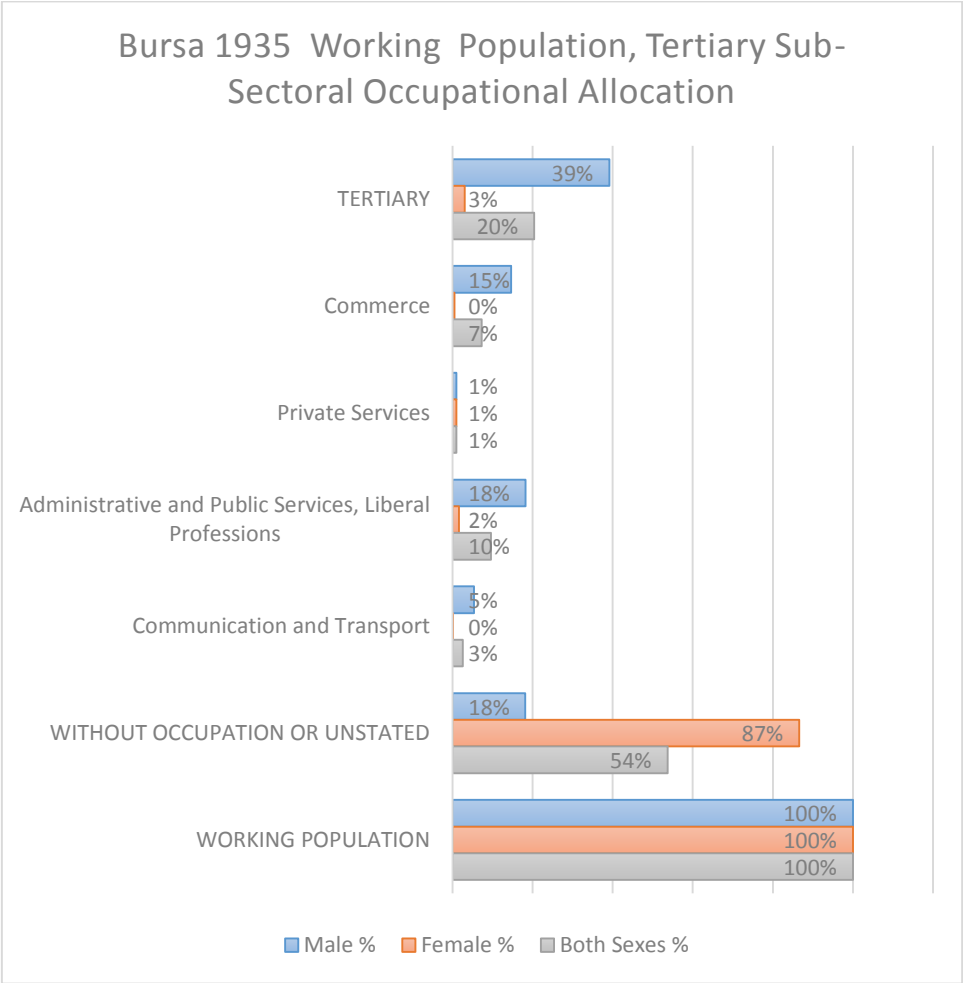


Chart 151-Bursa 1935 Gender Allocation within Tertiary Occupational Sectors

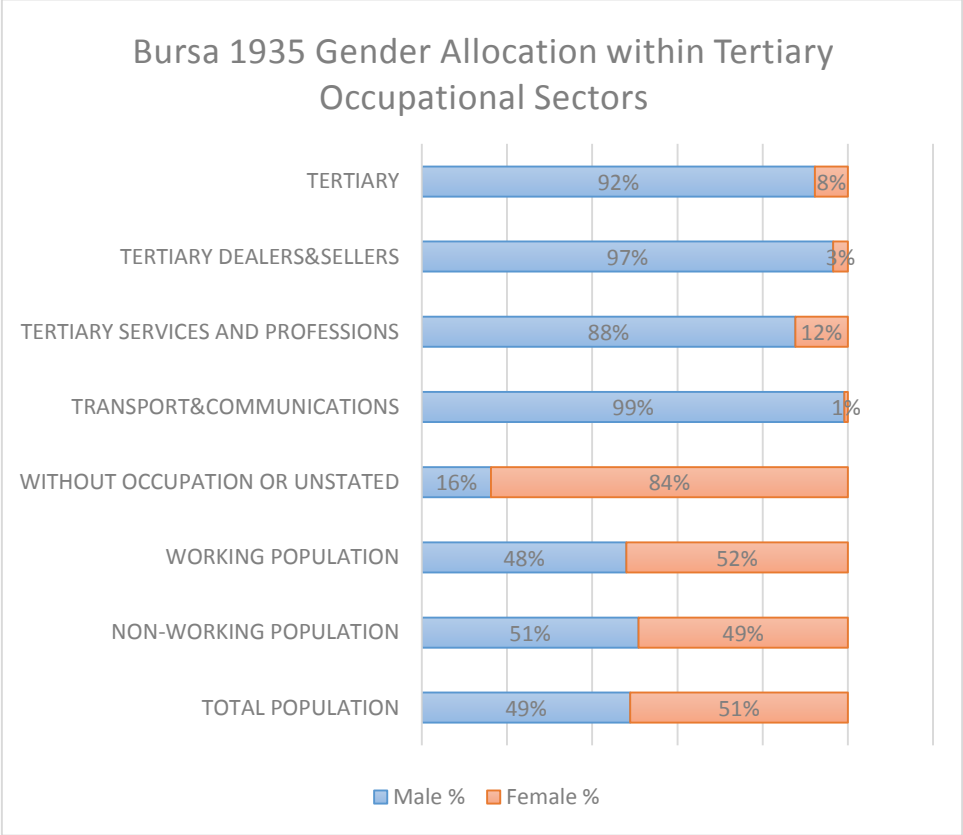
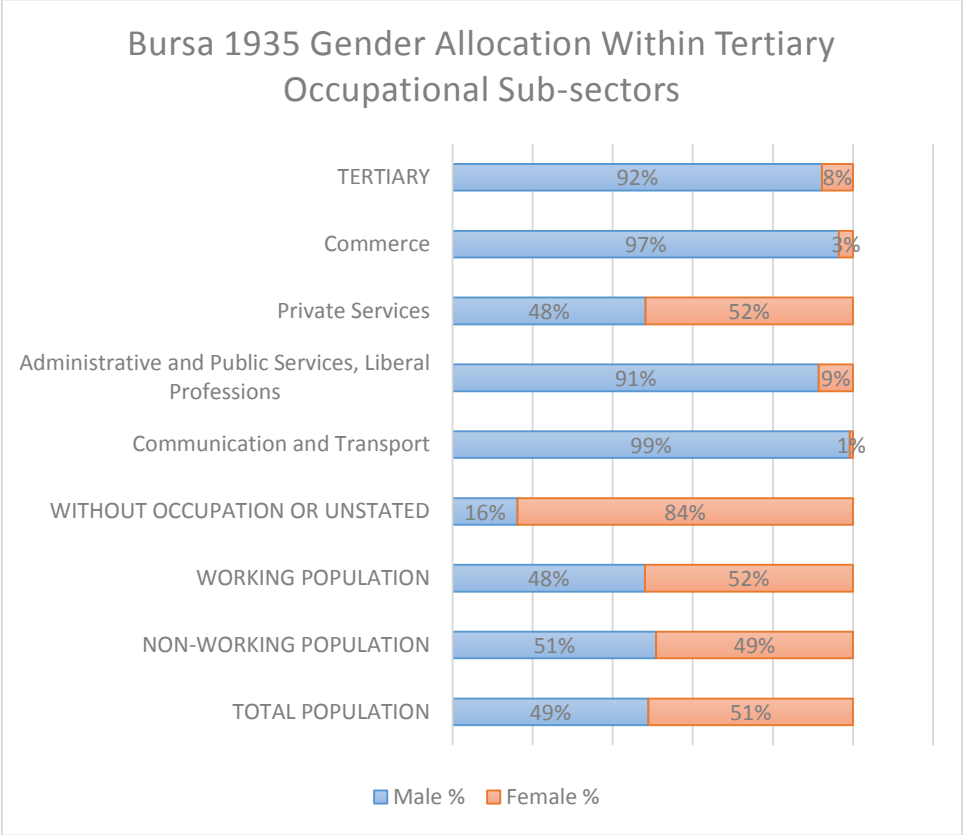


Chart 152- Bursa 1935 Gender Allocation within Tertiary Occupational Sub-sectors



Summary of Charts: Bursa 1935 Tertiary Sub-Sectoral Allocation.

Moving on to 1935, we would have a chance to look at gender differentiation within tertiary sector as well. Accordingly, while females are more inclined to be registered under tertiary sector and services, for working males, occupations under transport and communication label comes into the picture.

Table 44- Bursa 1945 Total Population, Tertiary Sub-Sectoral Occupational Allocation

BURSA 1945 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
TERTIARY	11454	875	12329	32%	2%	17%
TERTIARY DEALERS&SELLERS	4199	138	4337	12%	0%	6%
Commerce	4199	138	4337	12%	0%	6%
TERTIARY services & professions	5852	706	6558	17%	2%	9%
Private Services	133	76	209	0%	0%	0%
Administrative and Public Services, Liberal Professions	5719	630	6349	16%	2%	9%
TRANSPORT&COMMUNICATIONS	1403	31	1434	4%	0%	2%
Communication and Transport	1403	31	1434	4%	0%	2%
WITHOUT OCCUPATION OR UNSTATED	6781	28094	34875	19%	76%	48%
NO OR UNKNOWN PROFESSION	6781	28094	34875	19%	76%	48%
WORKING POPULATION	30697	31208	61905	87%	85%	86%
NON-WORKING POPULATION	4617	5665	10282	13%	15%	14%
TOTAL POPULATION	35314	36873	72187	100%	100%	100%

Chart 153- Bursa 1945 Total Population, Tertiary Sectoral Occupational Allocation

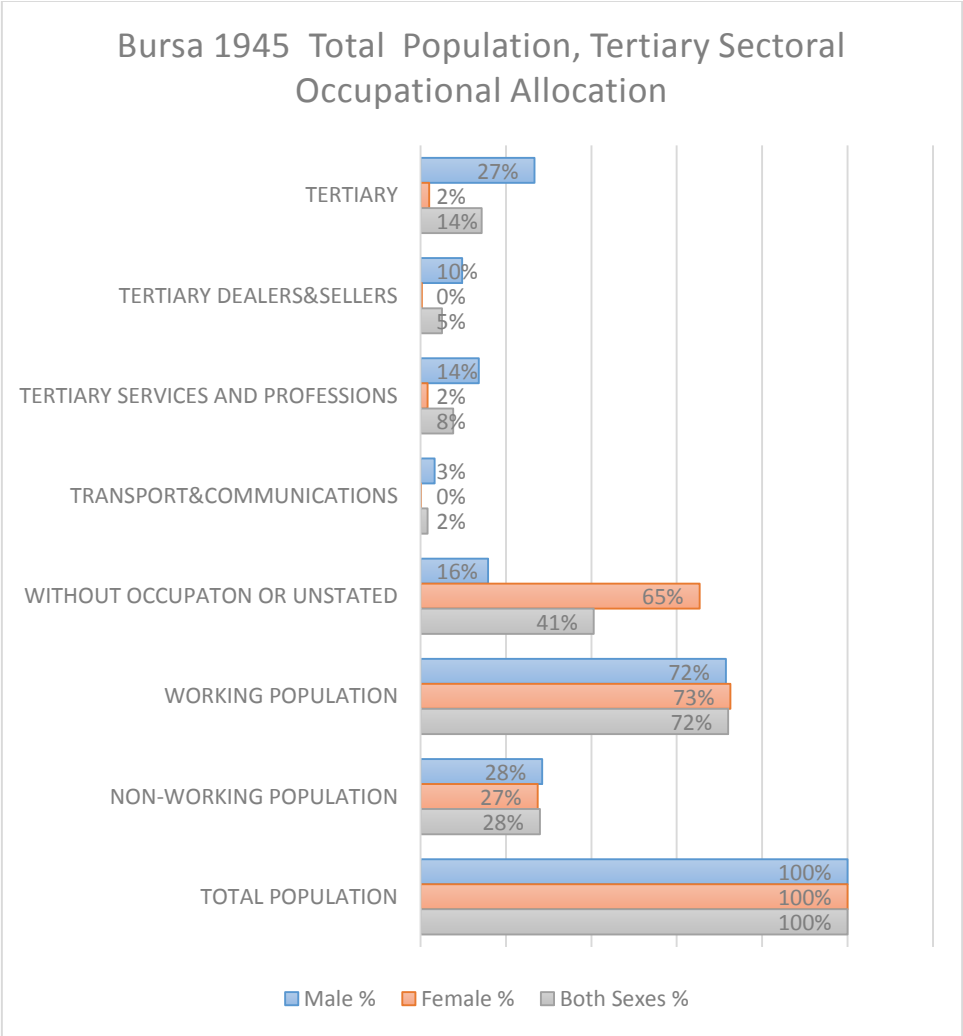


Chart 154- Bursa 1945 Total Population, Tertiary Sub-Sectoral Occupational Allocation

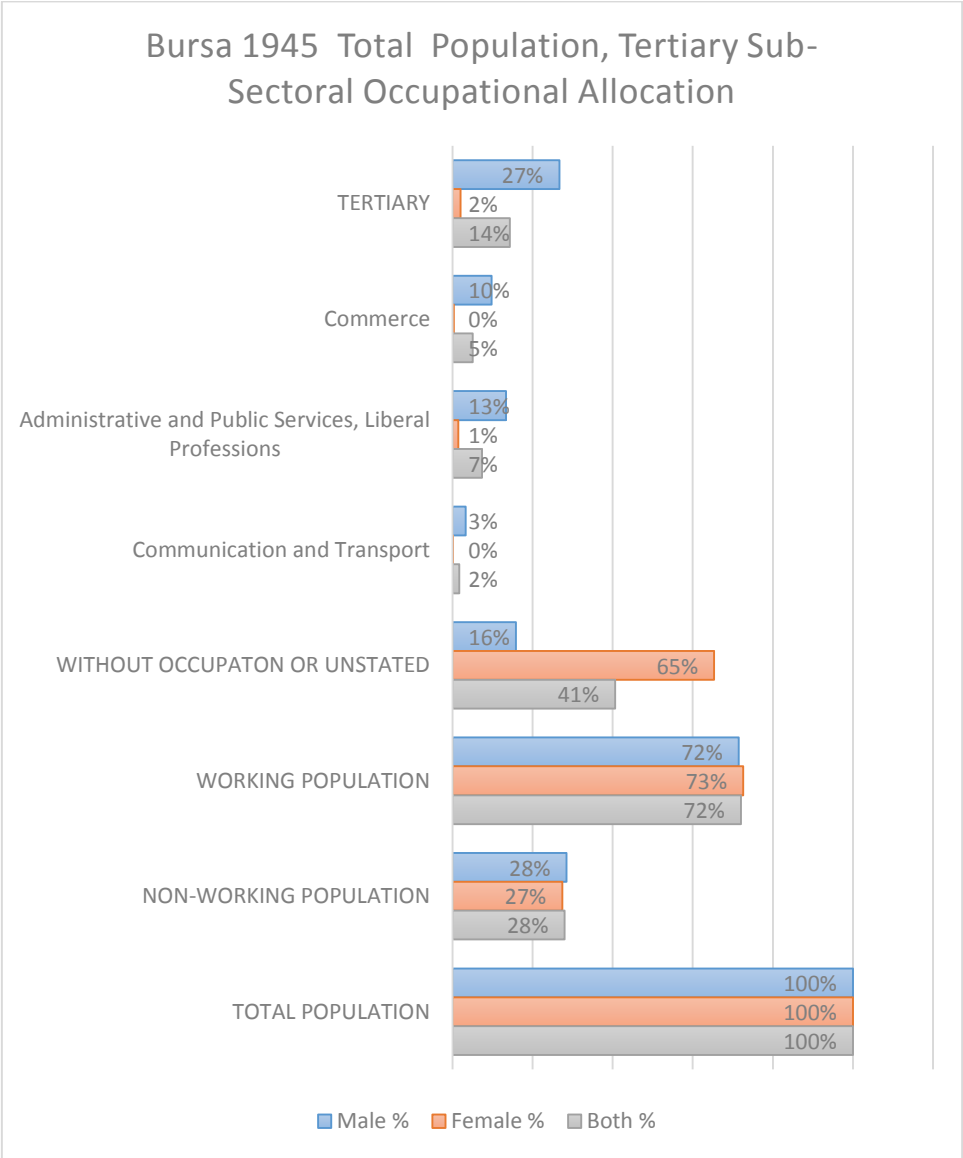


Chart 155- Bursa 1945 Working Population, Tertiary Sectoral Occupational Allocation

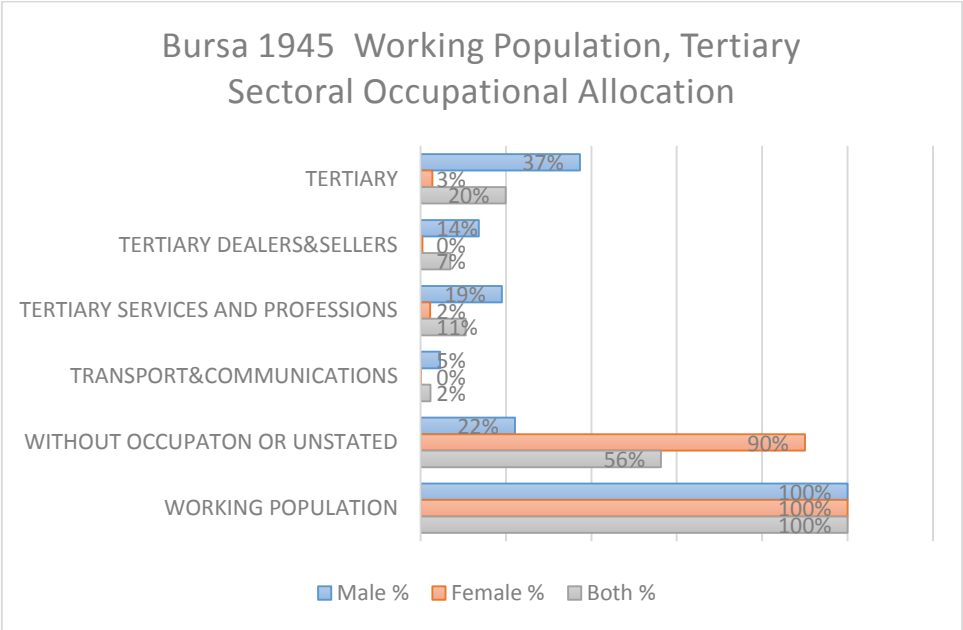


Chart 156- Bursa 1945 Working Population, Tertiary Sub-Sectoral Occupational Allocation

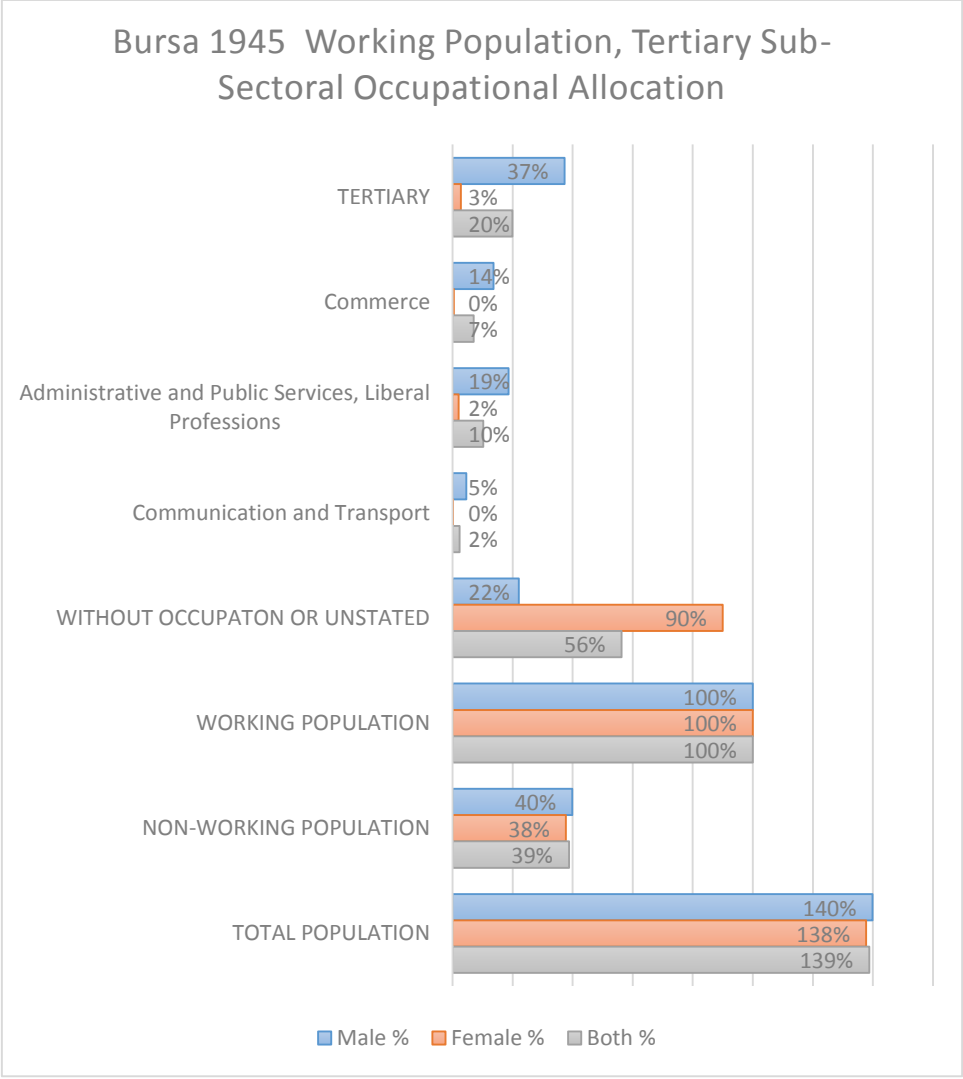


Chart 157- Bursa 1945 Gender Allocation within Tertiary Occupational Sectors

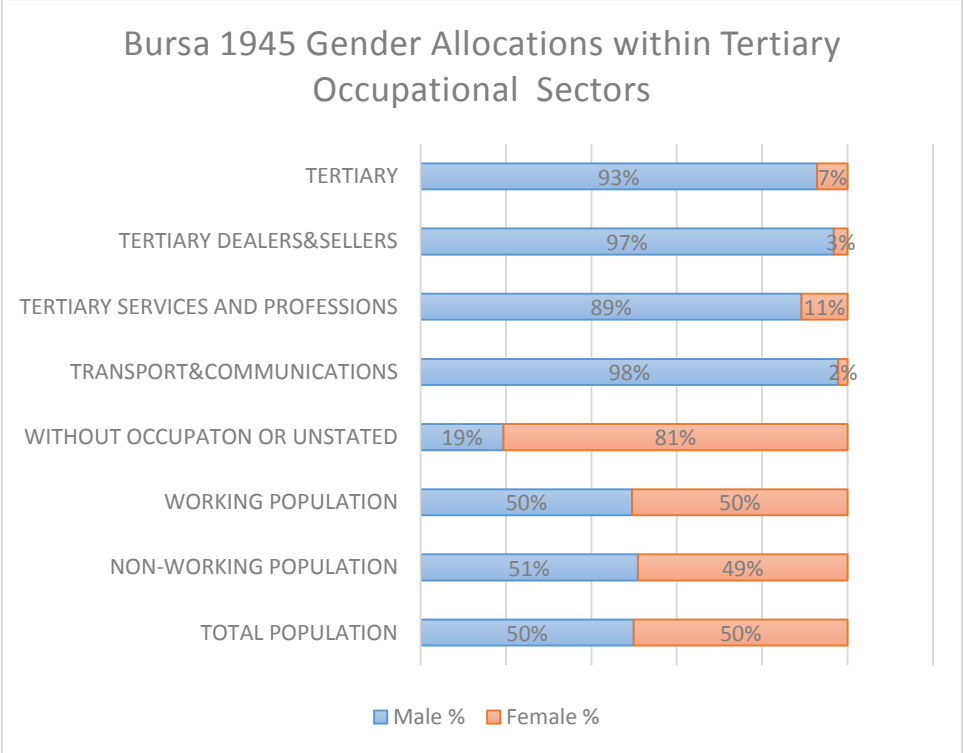
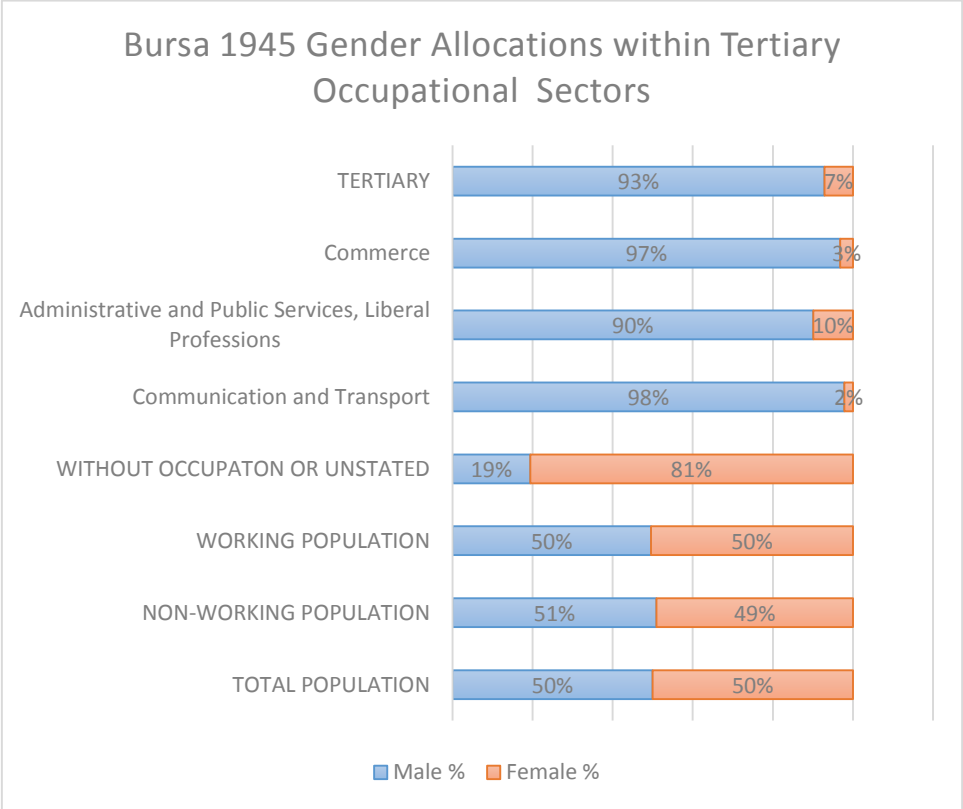


Chart 158- Bursa 1945 Gender Allocation within Tertiary Occupational Sub-sectors



Summary of Charts: Bursa 1945 Tertiary Sub-sectoral Occupational Allocation

Regarding 1945 tertiary sector sub-sectoral breakdown, we observe that the high share of tertiary services and professions title was stemming from administrative and public services as well as liberal professions combined. These are, most probably, ‘white-collar’ related activities at government induced enterprises which were blossomed after 1930s. Meanwhile, there were still a considerable amount of commercial activity, trade and selling occupations make up %17 for all tertiary sector activities, both sexes combined.

General Outlook 1845-1945

Chart 159- Bursa 1845-1945 Total Population, Both Sexes, Tertiary Sectoral Occupational Shift

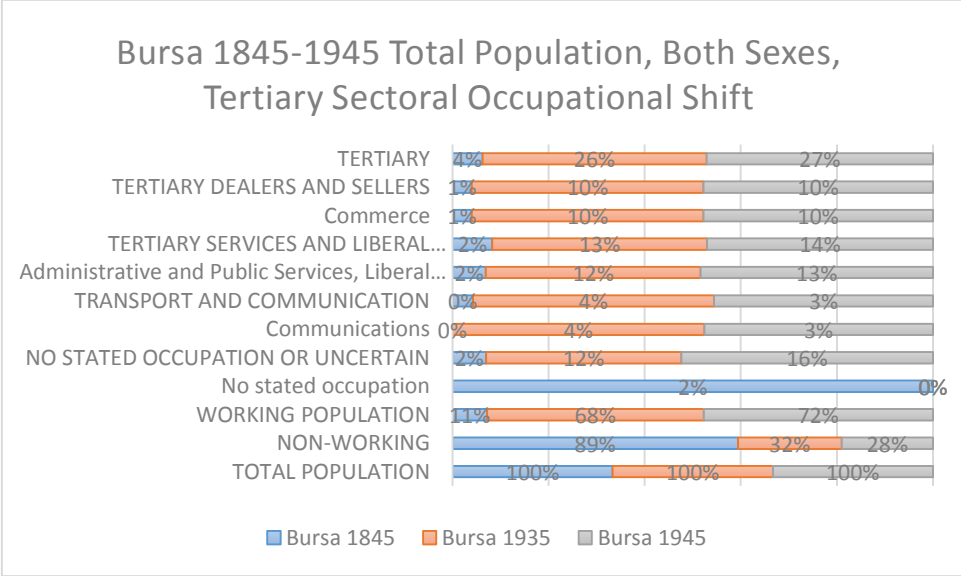


Chart 160- Bursa 1845-1945 Total Population, Both Sexes, Tertiary Sectoral Occupational Shift

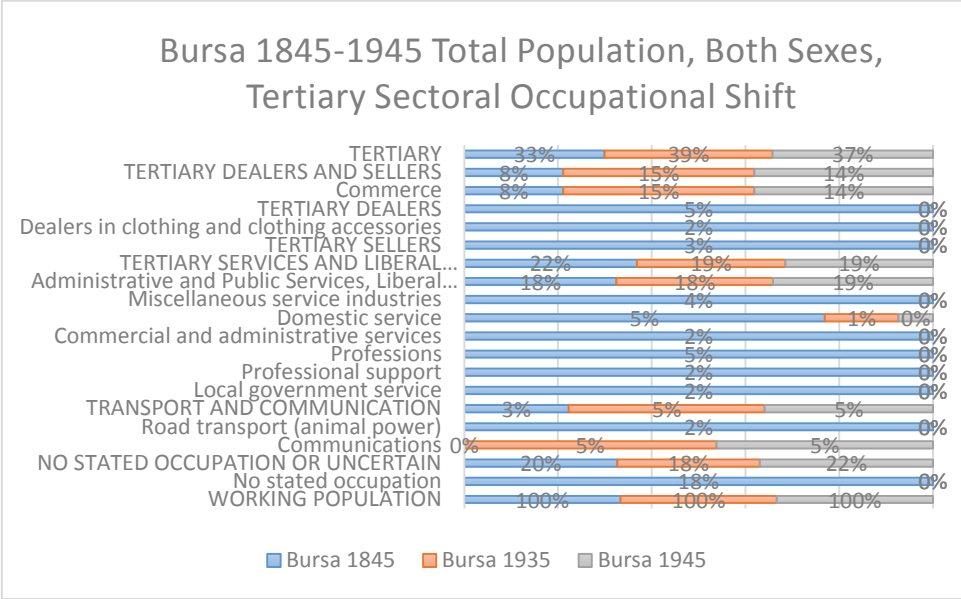


Chart 161- Bursa 1935-1945 Total Population, Both Sexes, Tertiary Sectoral Occupational Shift

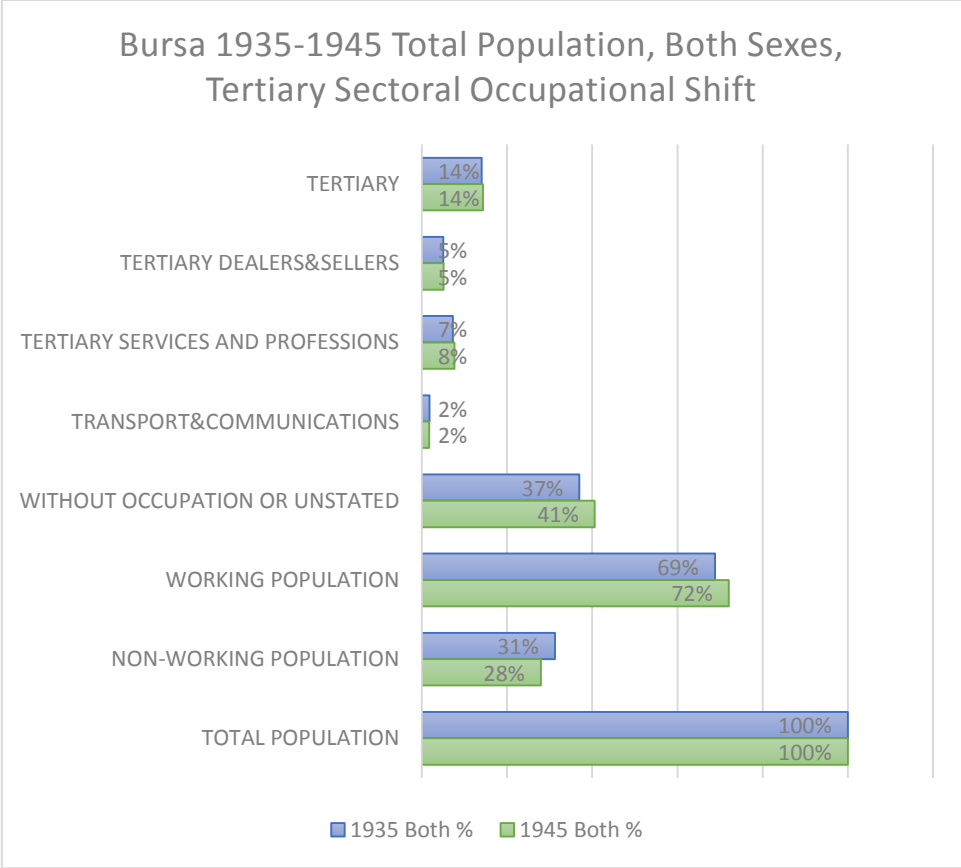


Chart 162- Bursa 1935-1945 Total Population, Both Sexes, Tertiary Sub-Sectoral Occupational Shift

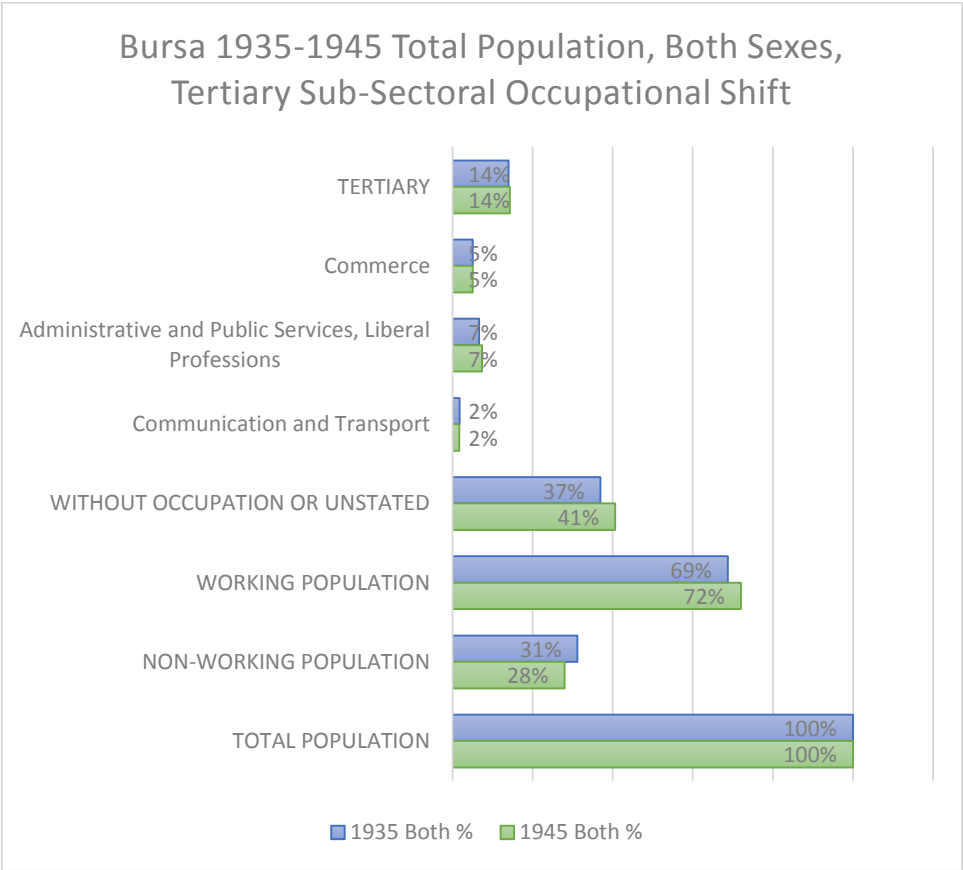


Chart 163- Bursa 1935-1945 Working Population, Both Sexes, Tertiary Sectoral Occupational Shift

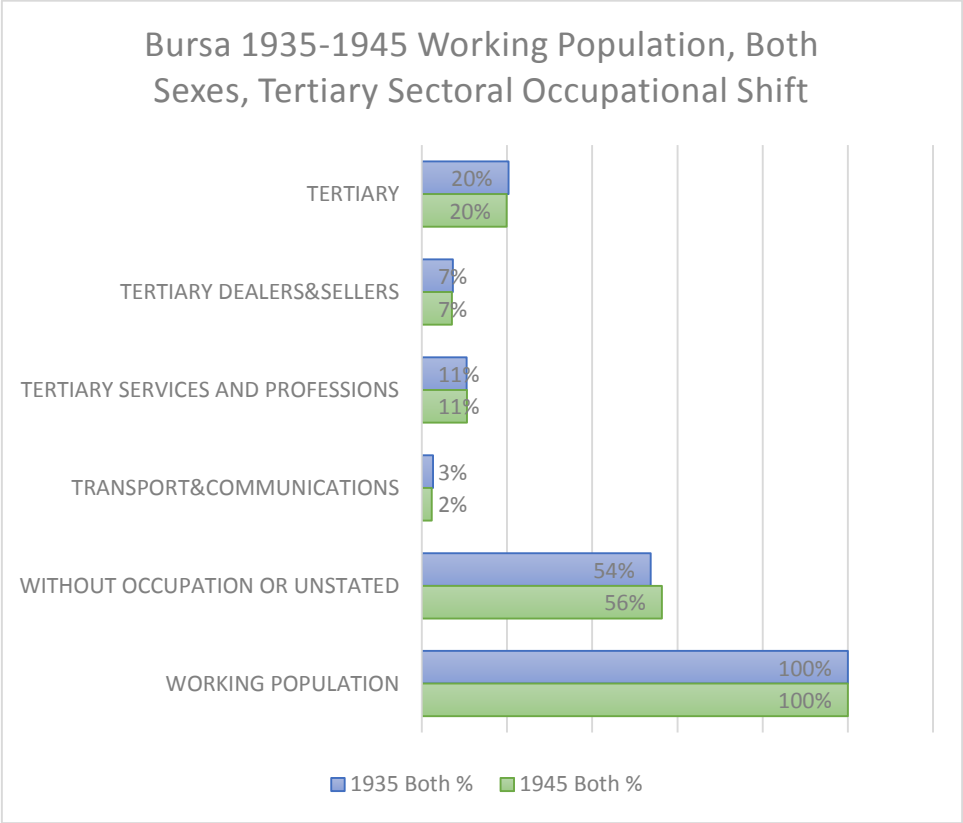


Chart 164- Bursa 1935-1945 Working Population, Both Sexes, Tertiary Sub-Sectoral Occupational Shift

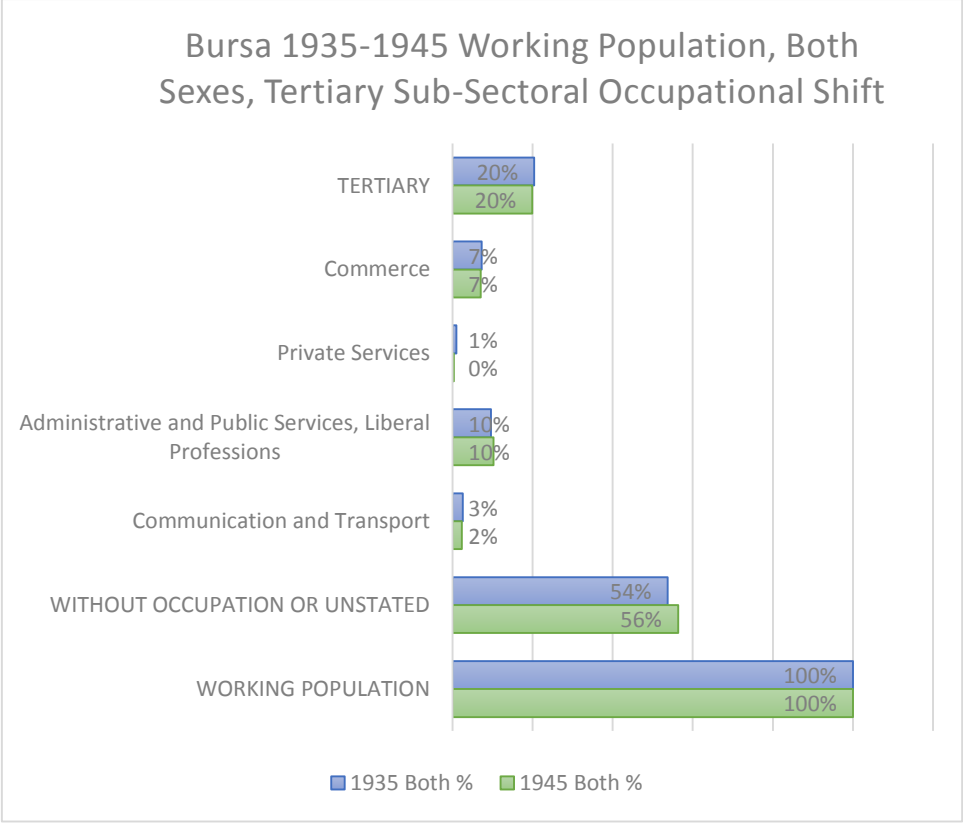


Chart 165- Bursa 1935-1945 Total Population, Males, Tertiary Sectoral Occupational Shift

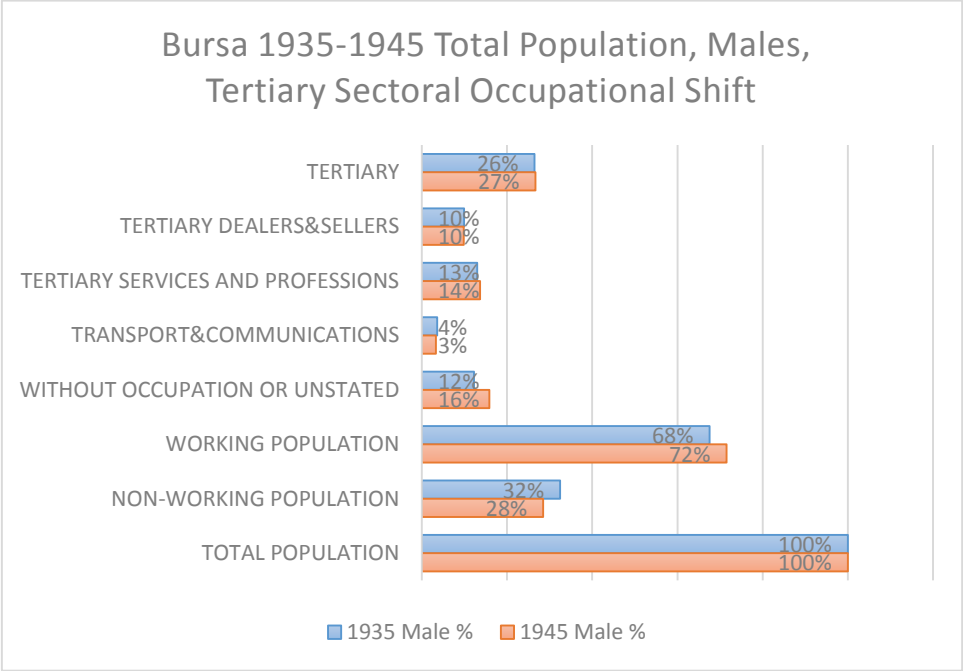


Chart 166- Bursa 1935-1945 Total Population, Males, Tertiary Sub-Sectoral Occupational Shift

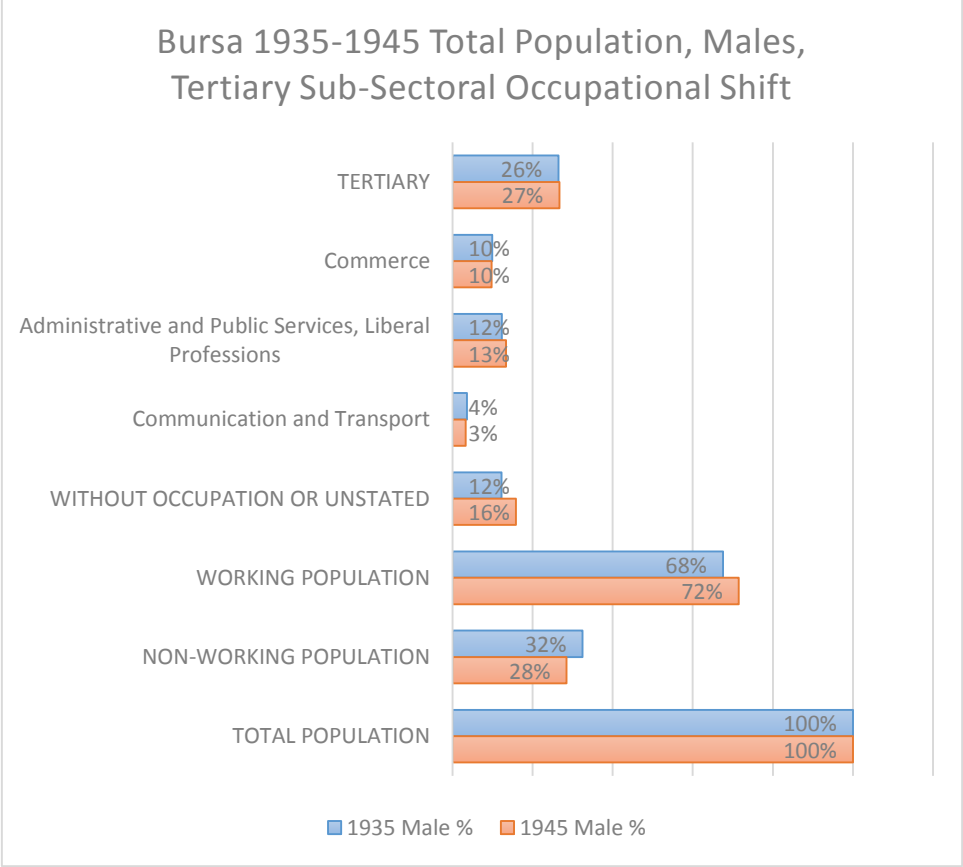


Chart 167- Bursa 1935-1945 Working Population, Males, Tertiary Sectoral Occupational Shift

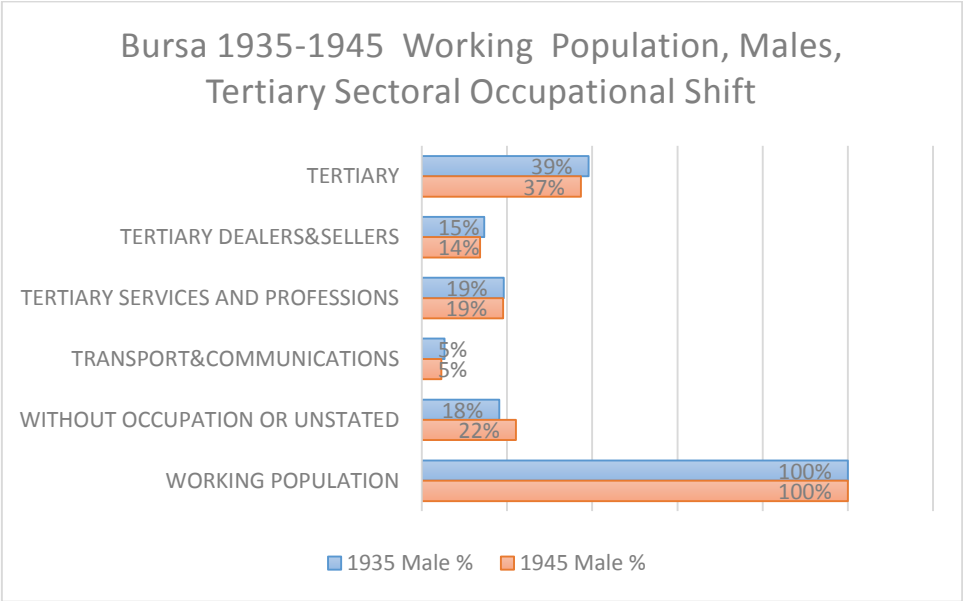


Chart 168- Bursa 1935-1945 Working Population, Males, Tertiary Sub-Sectoral Occupational Shift

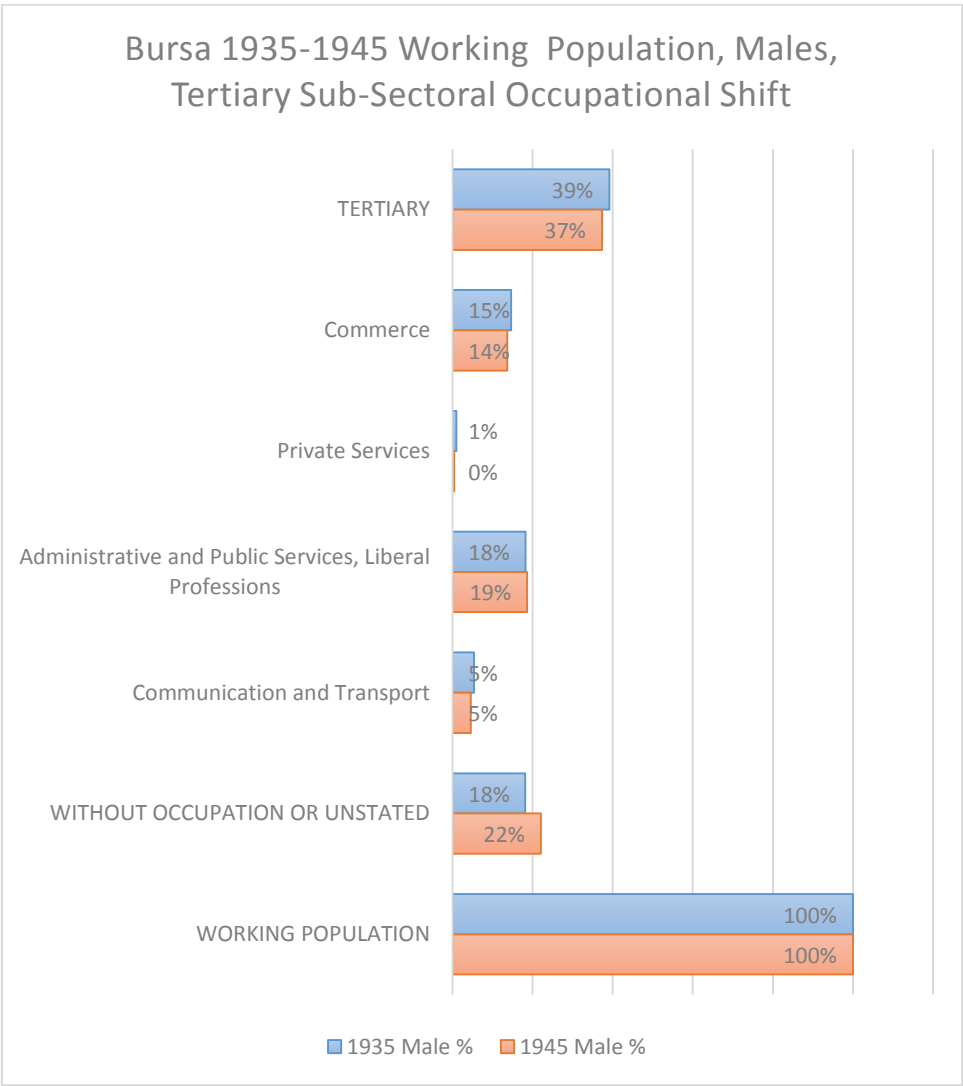


Chart 169- Bursa 1935-1945 Total Population, Females, Tertiary Sectoral Occupational Shift

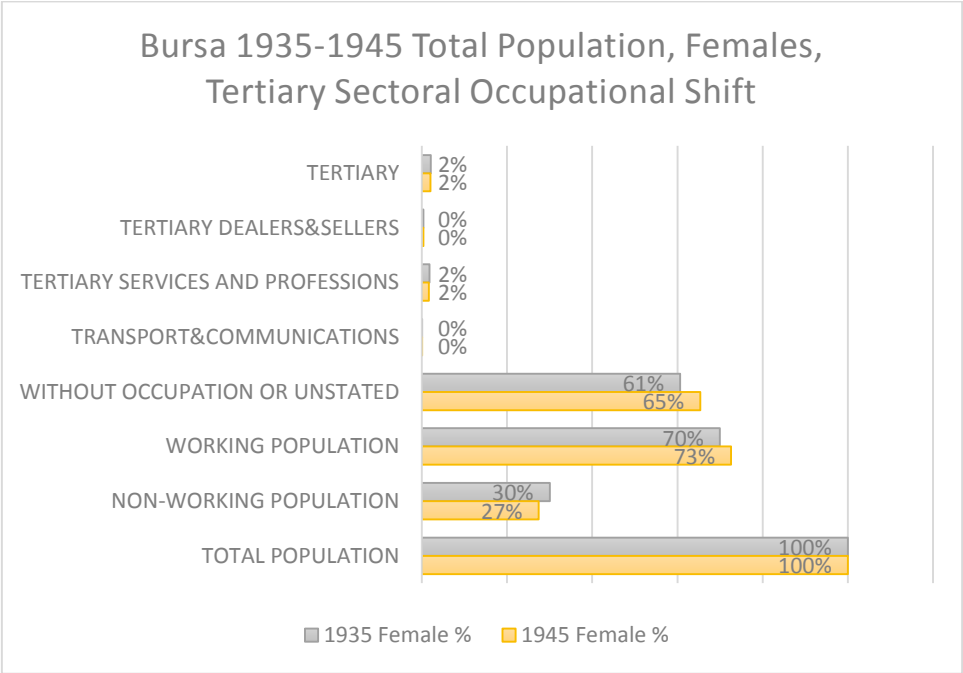


Chart 170- Bursa 1935-1945 Total Population, Females, Tertiary Sub-Sectoral Occupational Shift

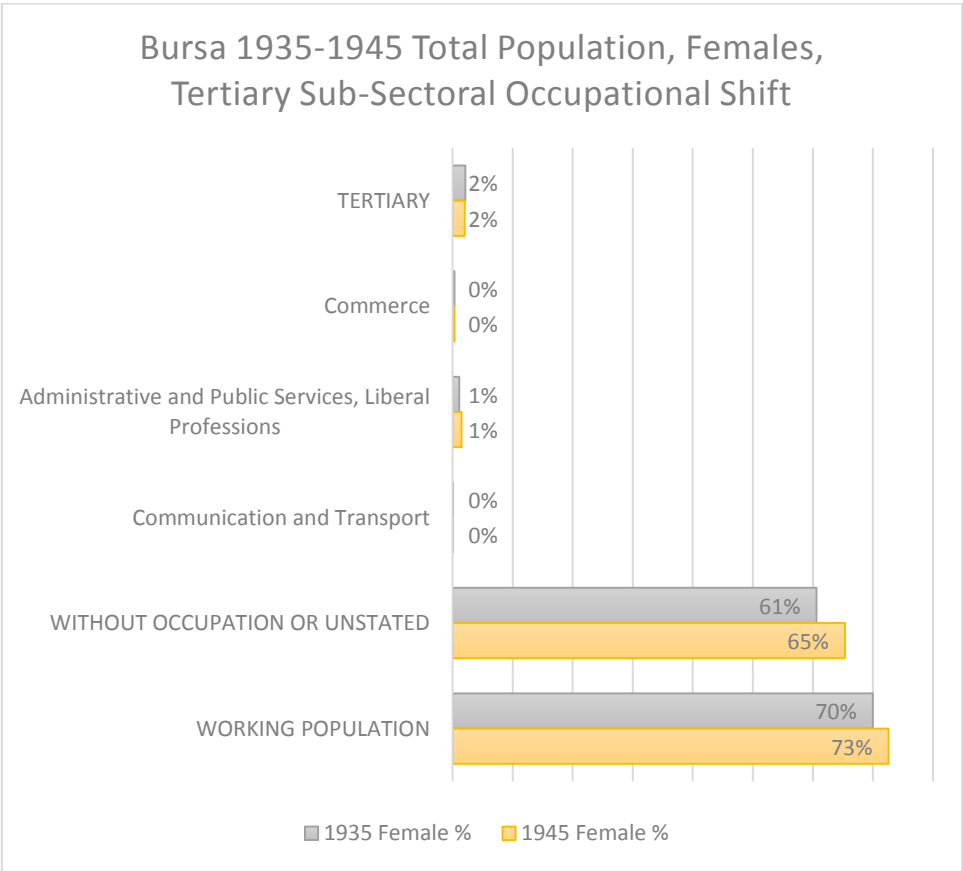


Chart 171- Bursa 1935-1945 Working Population, Females, Tertiary Sectoral Occupational Shift

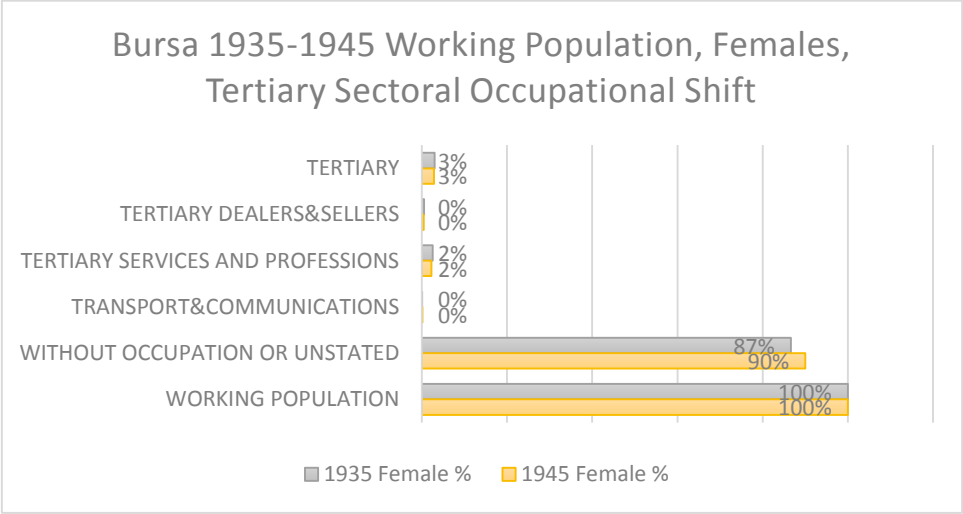
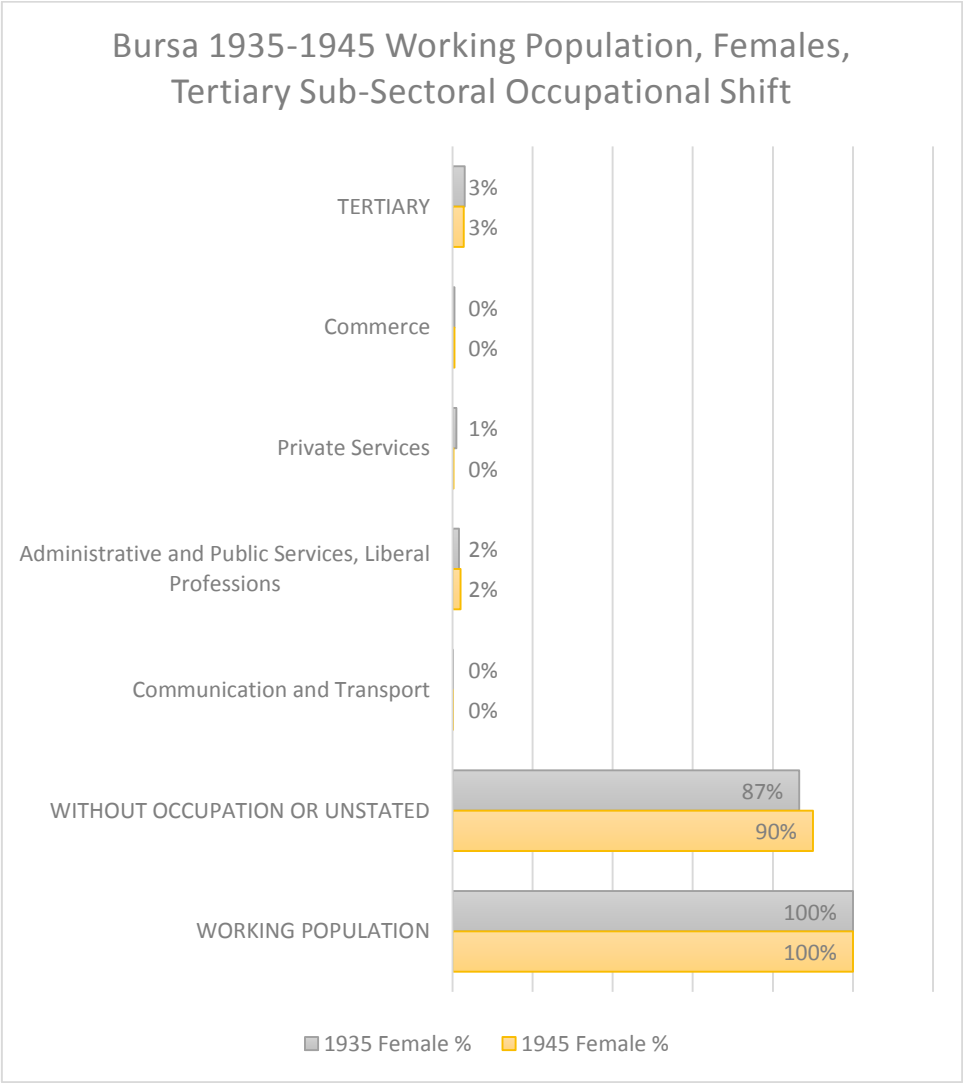


Chart 172- Bursa 1935-1945 Working Population, Females, Tertiary Sub-Sectoral Occupational Shift



Summary of Charts: Bursa Tertiary Sub-sectoral Allocation 1845-1945

To compare 1935-1945 tertiary sector shift once again, it has been observed that half of the tertiary sector was occupied by tertiary service and professions, which is a rate remain stagnant between the two censuses. Communications and transportation, especially among males stands as a considerable occupational sub-sector while the leading sub-sector according both 1935 and 1945 Census registers, administrative and liberal professions related occupations, exhibits a weak climb in terms of its shares among working population.

Discussion: Occupational Transformation in Bursa 1845-1945

In this discussion part I would like to assess the overall occupational transformation of Bursa in relation with the related industrialization literature I have mentioned about in the beginning of this Chapter. In the beginning of Chapter IV where I have mentioned about the Turkish industrialization case, there were two main themes that I have depicted: ‘deindustrialization within the 19th century’ and the ‘series of state economic initiatives in the 1930s that has been known as etatism’ In what kind of a dialogue between these specific and general industrialization themes with the occupational transformation of Bursa? What does the results in our hand, obtained from our analysis tell us in connection to these particular (Turkey specific) and general context? (On the industrialization theme)

As the first point to discuss regarding occupational transformation in Bursa between 1845 and 1945, one needs to start some methodological issues regarding the analysis and results obtained in this chapter.

While undertaking an analysis of occupational structural transformation between 1845 and 1945 for Bursa, we have encountered with a comparability problem which limited the extent of our analysis. Firstly, regarding 1845 temettuat registers, we could not check the gender structure of related occupations since 1845 temettuat records does not differentiate between them systematically. However, we know that 7759 persons were recorded for Bursa and 377 of them were reportedly Muslim women. Records for Non-Muslim women, meanwhile, was not available.²⁶⁷ One must beware that these figures are not accurate carry the potential to be under representative for the whole city ‘working population’ for some particular reasons.²⁶⁸

Coming to 1927 Census records have, another problem strikes: very high rate of non-working female population has appeared which hinders the researcher to explore much into gender specific occupational structure. In addition to that, the share of non-working population among females diminish when we come to 1935 and 1945 but nevertheless, a deeper elaboration was not possible since this time, the share of females who lies under the title ‘without occupation or unstated’ is quite high. Therefore, it would be only reasonable to explore on the issues regarding occupational transformation of Bursa between 1845 and 1945 considering males only. Regarding females, their shares within total population and labor participation rate are nevertheless, might be revealing for industrialization-occupational transformation-urbanization nexus and therefore, would be considered.

²⁶⁷Raif Kaplanoglu, *1844 Yılı Temettuat Defterlerine Göre Değişim Sürecinde Bursa'nın Ekonomik ve Sosyal Yapısı* (Bursa: Nilüfer Akkılıç Kütüphanesi, 2011), 87.

²⁶⁸The records on the tax survey were kept by neighbourhood as the basic unit as it was the case for all the urban areas in Ottoman territory, the households of Bursa were kept like the same. However, one must know that by 1831-1838, there were listed 164 neighborhoods in the city while only 137 of them were recorded in 1845 temettuat registers. When compared 1845 Temettuat Registers with Bursa Varidat registers of 1853, which one could only do through secondary literature review, in 1853, 145 neighbourhoods were recorded. Regarding all these, one can infer that in 1845 tax surveys, there were fewer neighbourhoods recorded than there are actually present.

Leaving methodological issues aside, one should make the following enquiry after reading the relevant results regarding Bursa: in what sense, could this attempt of tracking the transformation in the occupational structure could be crucial? My answer would be twofold; from the perspective of local, Turkish economic history context and from the other side, regarding the industrialization conception as a global historical phenomena. For this chapter, we would focus on the local context and leave the latter issue to the conclusion part.

In the introductory part of this Chapter, I have depicted two themes that encompasses Ottoman and Turkish economic history. Regarding 19th century, the deindustrialization phenomena and regarding Republican years, especially after 1930s, the era of state economic initiatives in order to boost industrialization or in other words: the etatist turn. In this part, I would like to render the occupational transformation in Bursa, in connection with these two alleged phenomena and try to relate my study with the ottoman/Turkish history of industrialization.

As we have seen in the section above: “Occupational Transformation in Bursa: 1845-1945”, first remarkable result that our analysis provide us would be identified as the high rate of secondary and tertiary sector activities along with the low level of primary activities. In other words, there might be an evidence that in the city of Bursa, a considerable part of working population was engaged in non-primary activities.

In the introductory part of this section, I have mentioned about how historically, Bursa had a strong economic activity related with silk trade, raw silk production and silk textiles

manufacturing but I could not depict any large scale industrial leap or strong ‘heavy-industry’ related initiative regarding the city. This finding, the rate of secondary and especially tertiary sector activities seems trivial in scales but once we think of rather pessimistic considerations of Bursa commercial activity during 19th century, the case is worth noticing. Ayhan Aktar, for instance, during the first half of 19th century, the entrepreneurial initiatives of banking sector was not developed enough, credit opportunities were limited and the ones who wanted to invest, had to put their money with very high interest payments between %20-40.²⁶⁹ Regarding this information, it would be very hard for some person to start a small-scale business, become a merchant or tertiary dealer. Despite not being ‘industrialized’ in the orthodox sense, merchants and craftsman compiled a considerable share of all occupations in Bursa according to Tax Survey registers of 1845, which is in my opinion, worth noticing.

Starting from low amount of primary sector activity, there might be a simple explanation: it would come as natural to think that in an urban setting, like Bursa, a high rate of primary sector activities like agriculture, even in a highly rural country like Ottoman Empire in mid-19th century, would not be totally unexpected. Perhaps, in a regional or country wide setting, Bursa was standing as an exceptional case or a regional urban concentration point. The extents of my analysis does not give an answer to this part of the industrialization problematic. In order to give a more convincing answer, one needs to further explore into regional and perhaps, county-wide setting. However, this explanation does not clarify where the remarkable amount of secondary and tertiary occupational concentration comes from. One must also note that we could comment that the rate of engagement in secondary and tertiary occupations are highly preserved from 1845 up until 1945 and this could be an indication that these rates obtained from

²⁶⁹Ayhan Aktar, “Bursa’da Devlet ve Ekonomi,” in *Bir Masaldı Bursa*, ed. Engin Yenal (İstanbul: Yapı Kredi, 1996), 123.

mid-19th century, were not baseless or temporary. Therefore, it would be an intriguing question to ask how and why the large amount of secondary and tertiary sector activities appeared among male (predominantly) observations in our results, taking 1845 Tax Survey registers as a source. One should not overlook the fact that not having a strong industrial basis within a city, does not mean that during 19th century, there were no reaction to changing production methods throughout the world in the city of Bursa. We know that in order to adapt with the changing methods for silk weaving, i.e. mechanization of the production process and the newly forming global production network, small-scale industries of the city responded and gave an attempt to adopt to the newly developing global capitalist world production order and the relevant global trade network. Many of these attempts were in relation with importing technology and knowledge from the Western countries.²⁷⁰

In order to make sense of these alleged adaptation attempts, one needs to check the relevant reactions within the production sphere. Perhaps, this could help us understand where the high rates of secondary and tertiary sector activities come from. This exploration would also bring us to the ‘deindustrialization’ debate that I have mentioned earlier in the introductory part of this chapter. Therefore, it would be a complementary task to ask in what extent, de-industrialization was a valid theory for Bursa secondary sector activities and what does the occupational structure tell about the reflections and implications of this phenomena? Regarding ‘de-industrialization’ phenomena, one also could ask, in what extent, the city of Bursa has been affected and in what ways the city population responded to the alleged phenomena. Before looking at the hundred years’ transformation within the occupational

²⁷⁰Ibid., 212.

structure, one needs to look from the earlier literature on the reactions of Bursa industry to the changing production conditions.

Ayhan Aktar notes that since the second half of 19th century, Bursa production units has transformed their production mentality into a more commercialized, export-based mind-set; the relevant products would have to adapt to the newly developing global market conditions.²⁷¹

The technical improvements and the mechanization in the spinning process, which was improved by a new machine found in Lyon 1824, started to change textile manufacturing everywhere around the world and city of Bursa also responded²⁷². There was the first steam driven silk yarn factory in 1838, established by Swedish called Falkeisen, an Armenian called Taşçıyan and an anonymous French although this factory was burned just one year after its establishment. However, Falkheisen took a second initiative in 1845 and this time, Falkheisen managed to export to Lyon²⁷³ as well as Fabrika-ı Humayun Silk Factory which was established in 1852 as a state initiative.²⁷⁴ However, this factory which was very poorly managed and turned out to be an ineffective production unit. ²⁷⁵

During the second half of the 19th century production processes and methods were changing in Bursa. On the one hand, there were new establishments and remarkable entrepreneurship on the way to adapt new, more liberal global economic trade conditions. There were many factory initiatives which came predominantly from non-Muslims or foreign investors. We would see

²⁷¹Ibid., 121.

²⁷²for the most detailed study see Inalcik, "Bursa and Silk Trade."

²⁷³Erder, "The Making of Industrial Bursa," 99.

²⁷⁴ Fahri Dalsar, *Türk Sanayi ve Ticaret Tarihinde Bursa'da İpekçilik*, İstanbul Üniversitesi Yayınlarından, no. 856 (İstanbul, 1960), 411.

²⁷⁵Erder, "The Making of Industrial Bursa," 109.

that these attempts, to some extent, keep the secondary sector activities or in other words, textile manufacturing of the city, alive. Nevertheless, Bursa would have to accept its position on a more primal layer within the global silk textiles production network; i.e. specializing on the first phases of the silk production and effectively, positioning itself as a raw material provider. In the beginning of 1850s, the numbers of people who were working in the silk weaving factories, the main industry of the city, were around 1700 while by mid-decade, this has been risen to 3800. Despite the fact that these silk-weaving factories were not working on large scales, they were not entirely 'feudal' type of enterprises; even the smallest scale factories were having at least 350 workers.²⁷⁶ According to British Vice-Counsel Maling's report, production in factories gained popularity and while in 1860, there were 5145 persons working in the silk reeling factories, in 1872, there were 72 establishments as such.²⁷⁷

According to Leila Erder, by 1855, almost around ten factories established by French initiatives. In 1860, there were 90 filature factory as well as 4345 hand looms while 180 workers on average for a loom. According to a rough guess, 7800 workers in the filature factories while 70.000-75.000 people were living in the city²⁷⁸ The number of establishments would be 45 in 1890 76,303 people living in the centre.²⁷⁹

²⁷⁶*Yurt Ansiklopedisi: Türkiye, İl İl: Dünü, Bugünü, Yarını* (Istanbul: Anadolu Yayıncılık, 1981), 1675.

²⁷⁷Nurşen Günaydın and Raif Kaplanoğlu, eds., *Seyahatnamelerde Bursa*, Bursa Ticaret Borsası Kültür Yayınları (Bursa: Altan Matbaacılık, 2000), 150–151.

²⁷⁸ Erder, Thayer Leila. "The Making of Industrial Bursa: Economic Activity and Population in a Turkish City 1835-1975." University Microfilms International, 1976. pp. 123-124

²⁷⁹Rüknettin Akbulut, *Her şeyi İle Bursa* (Istanbul: Sulhi Garan Matbaası, 1957), 31–32.

During the second half of the 19th century, we know from earlier literature that there was further change of structure in the production: while the hand looms were disappearing,²⁸⁰ gender allocation within the occupational structure, especially regarding manufacturing, was changing in favour of females. Towards the end of century, the factory workers were predominantly female and most of them (%96) were non-Muslims.²⁸¹ The factories were built generally on specific locations, such as riversides (Cilimboz and Gökdere rivers) for its plants and the workshops for production due to obvious advantages that the water provides: favourable transportation possibilities, and cost effective energy source the hydraulic power.²⁸² These areas where predominantly, non-Muslim females were settled and living.²⁸³

There might be some overestimation regarding these figures taken from secondary sources were probably due to the methodological differences²⁸⁴ However, for one thing, we could be sure: around mid-19th century, there was a strong manufacturing activity in Bursa in the form of raw silk production which supports the earlier findings about the importance of silk industry for the city. Therefore, even after the Baltalimani Treaty, Bursa silk industry was not entirely depleted or diminished but it might be changing its form and production methods, at least by 1850s.

Therefore, we could more or less say that between 1840-1860 silk production at its best and having its golden age. There was clear attempts both by the state as well as the private, mainly

²⁸⁰Sevilay Kaygalak, *Kapitalizmin Taşrası: 16. Yüzyıldan 19. Yüzyıla Bursa'da Toplumsal Süreçler ve Mekânsal Değişim*, 1. baskı, Araştırma-Inceleme Dizisi 229 (İstanbul: İletişim Yayınları, 2008), 158.

²⁸¹Ibid. 152–153.

²⁸²Aktar, “Bursa’da Devlet ve Ekonomi,” 123.

²⁸³Satıcı, “19. Yüzyılda Hüdavendigâr Eyaleti,” 74.

²⁸⁴ For instance, on the definition of ‘what a factory is’ or ‘who is a factory worker’ could change a lot depending on the definition of the researcher.

led by foreign capital, initiatives. One question appears at this point: Did these factory investments, which were starting to prosper from mid-19th century on, managed to put Bursa into the way of industrialization *proper*? Regarding literature, the answer is a clear no.

Aktar argues that despite all these developments and industrialization attempts in the relevant period, the population remained agricultural despite all these attempts. Many of the workers who were occupied at factories were hired seasonally or periodically and occasionally turned back to their villages.²⁸⁵ Industries other than silk reeling, for instance weaving or painting, were in tatters According to another report written by British vice-council Maling, in 1869, the industry workers were still a mere %10 of the total population and most of them were unskilled workers, working in small-scale workshops. In the large factories which processes silk, there were 300 persons. While 6000 spinning wheels were available; 9000 persons were working on them.²⁸⁶ Leyla Erder also claim that increasing silk production after 1875 did not bring absolute changes in terms of technology and labour and productivity.²⁸⁷

Aktar points to an existence of a dual economic structure in the production process. In his account, due to one-dimensional industrialization-only, meaning, a huge concentration to silk reeling; the city economy became vulnerable to the fluctuations of external demand. Between regarding these processes between 1840 and 1860, for Aktar, these could be hardly be qualified as *industrialization*.²⁸⁸

²⁸⁵Aktar, "Bursa'da Devlet ve Ekonomi," 127.

²⁸⁶Ergun Türkcan, "İngiliz Konsolosluk Raporlarına Göre Ondokuzuncu Yüzyılın İkinci Yarısında Bursa," *Toplum ve Bilim* IV, no. 34 (1985): 386–91; cited by Aktar, "Bursa'da Devlet ve Ekonomi," 125.

²⁸⁷Erder, "The Making of Industrial Bursa," 97.p. 97

²⁸⁸Ibid. 129.

The decline in the production process regarding 1869, according to Aktar was due to the spread of specific disease for silkworms called as pebrine and also partly associated with to the opening Suez Canal and new China way. Changing trade routes weakened Ottomans silk industry against strengthening Europeans. The overall deflation in world prices between in the depression times of 1873-1896, was without a doubt, stands as a factor and Ottomans were not immune to its effects.²⁸⁹

However, did the manufacturing fully collapsed in Bursa during the 19th century and nothing has remained from the industrial secondary sector activities towards the end of 19th century? Did the alleged de-industrialization hit the city from where it prospers, the silk industry and led a more raw material extraction oriented production setting?

Donald Quataert refuses to call the case of Bursa silk textile manufacturing as a ‘collapse’ case. Rather, he argues, it was a change of form in the production process He noted that Ottomans significantly increased their cotton yarn production and expanded their domestic markets especially in the post 1896 era when the prices increased. The aggregate production levels were greater in 1914 than 1800 in raw silk production however wool, cotton, linen makers were disappeared. Quataert uses the saying ‘moribund manufacturing’ for this process, rather than ‘dead manufacturing’. While in some of the products, rugs, lace raw silk-there is a possibility that overall exports were larger than the beginning of the period: yarn and cloth for domestic demand-silk-carpet for foreign Ottoman manufacturing may have grown in itself but lose its

²⁸⁹Quataert, *Ottoman Manufacturing in the Age of the Industrial Revolution*, 15.

share on the international global trade arena. Instead, Ottoman cloth production have doubled but only for domestic purposes²⁹⁰

According to Aktar, it was the establishment of 1881 Duyün-u Umumiye (Ottoman Public Debt Commission), a type of debt-collecting commission, standing as a semi-colonial institution, was in a way, contributing to the changing nature of Bursa production process. Under the influence of this public debt administration, many measures and adjustments, including protective tariffs²⁹¹ were made in order to make use of resources in the factory production more efficient. The effects were not long-term satisfactory, though; Ottoman manufacturing as well as Bursa silk industry would continue to struggle up until 1930s.

Murat Çizakça acknowledges that deindustrialization was in force but this was not due to the new trade agreements or similar developments. He argued that that the relatively high specialization of Ottoman silk industry in the production of silk side and not the clothing side has its roots from the second half of the 16th century. The silk industry has become a crucial factor of tax revenue that has been collected by the state as well as for the private sector and capital accumulation. Therefore, the city has been essentially linked to raw silk production and not textile manufacturing or clothing and not because of an external shock.²⁹²

²⁹⁰Ibid. 16–17.

²⁹¹Aktar, “Bursa’da Devlet ve Ekonomi,” 131.

²⁹² Çizakça, “A Short History of the Bursa Silk Industry (1500-1900).”

What does our results in hand tells us about the ‘de-industrialization’ literature that I have mentioned above? Could we also obtain the signs of a total collapse in the manufacturing industry and hence, a downfall in the secondary sector activities or an ‘intra-sectoral transformation’ which indicates that production process in the city was more heavily specialized among the processes which were more primitive and close to raw material extraction.

Regarding 1927 census, we observe that primary sector has widened its base from 1845 to 1927 meanwhile, the role of secondary sector among the occupational sectors has been lessened and meanwhile, tertiary sector remained high in shares among the working population. This would mean the secondary sector could have lost some part of its working population base to primary and tertiary sector. If we consider the de-industrialization, being about a turn back from secondary sector activities to primary oriented ones, we could say that the results in our hand, only partially acknowledges that deindustrialization forces were in charge. The urban growth has been developing since 1845 to 1927 and moreover, tertiary sector activities are not in decline. Since de-industrialization would also mean a ruralisation process, it would be not completely right to call the case as ‘de-industrialization’ in the city of Bursa.

One needs to be cautious in these comments about the decline of secondary sector activities regarding 1927 Census records. As I have indicated previously, 1927 Census have serious flaws from many sides where we do not have the sub-sectoral occupational breakdown and sufficient level of data regarding female population. The labor participation rate gaps between 1927 Census records with the 1935 and 1945 Census records are too wide to call the former to be a reliable source.

Moreover, there is a possibility that the city of Bursa has lost its secondary sector activity base to the surrounding rural areas and this might not have been reflected in our study, since I was only tracking on the occupations of city population. In order to answer this question, once again, we need to widen our analysis to regional level despite the fact that secondary literature on Bursa industrial activity, does not mention about such a ‘rural industrialization’ trend during 19th and in the beginning of 20th century.

Ayhan Aktar notes that by the First World War broke out, a second halt came for filature production and later on, 5 during the first years of Republican era, around 1920s, regarding Bursa, people were occupied mostly with peasantry while grain becoming the most popular agricultural product. In 1923, filature factory working population was around 1500 which was pointing to a significant decrease when compared to 1870 level; the share of factory working population have decreased by %37.²⁹³

In the last years of Ottoman Empire, between 1913-1918, due to some measures, most initiated by ruling Committee of Union and Progress in the search for a ‘national economy’ , raw silk production climbed from 304 ton to 511 tonnes.²⁹⁴ During 1908-1913, five new factories were established. 1400 hand looms were present while most of them was small-scale production. These attempts were not to compete in the foreign market but only domestic market. The textile manufacturing however was pretty limited. In 1924, in various filature factories almost 1500 workers were present, most of the companies were held by non-Muslims. Before First World War, %90 workers in these filature factories were females but after the war, this has been

²⁹³Aktar, “Bursa’da Devlet ve Ekonomi,” 137.

²⁹⁴*Yurt Ansiklopedisi*, 1696.

lowered to %4 due to large influx of immigrants from Balkan regions. These immigrants were largely unfamiliar with the related industries and unskilled labour force was a harmful factor for the city manufacturing.²⁹⁵ Between 1922 and 1925, the number of textile factories climbed from 3 to 27 textile factories but most of them were small scale operations.²⁹⁶ However, towards the end of decade, due to limited credit opportunities, new establishments could not be open or the existent ones could not increase the scale. Teşvik-i Sanayi Law (a special law designed to encourage private sector to invest) was insufficient and high taxes were still hindering entrepreneurs to take action. Most of the textile manufactures were imported between 1925 and 1928. Bursa manufacturing also focused in food production; in Gemlik and Mudanya, there were 12 factories while in 1926 a Çeltik (rice) factory and 1928 konserve (can) factory were established.²⁹⁷

We can compare our results obtained from analysis with other sources to check the compatibility. According to industrial census of 1927, there were 408 textile manufacturing factories and there was 2872 workers present at these enterprises. Moreover, regarding food industry, there 3665 workers. 9886 persons were in agricultural related industry, which accounts for %37 of whole industry, while %29 of the working population were engaged in textile industries. Wood industries was also important; 548 workshops 1064 people were working at barrel, chair manufacturing factories like İnegöl Kereste, Bıçkı Factory. (Wood and related production) Machine processing had also an important leverage overall 762 workshops 1426 persons.²⁹⁸ These industrial census records indicate that despite all the hardships relating with First World War years and afterwards, the establishment of Turkish Republic, there was a

²⁹⁵ Ibid. 1698.

²⁹⁶ Ibid.

²⁹⁷ Ibid.

²⁹⁸ Ibid. 1699.

significant secondary sector productive activity level which does not support our results in hand, obtained from our occupational based analysis.

We must recall that these are ‘industry based or supply sided’ estimations and in this project, we are advocating that these could not fully reflect the labour force structure. One could infer that the industrial census data could not reflect the actual occupational structure, the related figures seems to be a little exaggerated here. Our results regarding the number of working people who were engaged in primary, secondary and tertiary products were much less. Moreover, we could not compare these data with our results since for 1927, occupational data was not present.

All these developments show that in fact, from 1900 to 1920, there were attempts to keep industrial production awake. Moreover, Donald Quataert notes that despite the decline of Bursa manufacturing from in the last twenty years of 19th century, starting with 20th century, there was partial but remarkable recuperation.²⁹⁹ The trends of mechanization and use of stem power was depicted. For instance in 1913, government classified 41 bursa mills as industrial establishment steam powered mills employed 4600 workers, which was containing %20 of all industrial employees while manually powered reeling establishment fewer than 300 workers. *“On the Eve of World War I, steam silk-reeling mills predominated in the city and the owners of these mills controlled the most advanced sector of the Ottoman silk industry.”*³⁰⁰ From 1900

²⁹⁹Donald Quataert, “The Silk Industry of Bursa, 1880-1914,” in *The Ottoman Empire and the World-Economy*, ed. Huri Islamoglu-Inan, 1987, 284–308.

³⁰⁰Ibid. 293–294.

to 1917, Bursa silk industry ‘prosperous’ and ‘growing’ sector. The production of fresh cocoon, and raw-silk grew by great margins.

Despite these developments, the silk industry could not be labelled as ‘prospering’ when we come towards the end of 1920s. As an example, cocoon production fell from 7.8 to 8. Million between 1913 and 1924. The alleged reasons are not hard to refuse: declaration of war 1914 isolated Bursa; also between 1920 and 1922, Greek army occupied the city. Foreign Balkan population influx and their relative unacquaintance for the relevant job did not help. During war years, most of mulberry bushes were cut down largely which was crucial for raw silk production as well as foreign influx of capital was halted.³⁰¹ Nevertheless, resilience of the small-scale production is noticeable: despite the decline in the secondary sector are mostly relevant for the tech production; putting out, handloom, Works at houses were remained obsolete but still, nevertheless, existent.³⁰²

Keyder acknowledges that the general structure was small-scale. In 1927, the enterprises who were hiring less than 4 workers regarding food industry having a share of %78 and the other relevant rates are %74 metal %89 chemicals %72 wood %83 therefore, domestic local needs. p. 81³⁰³ the production was directed consumption goods, while capitals goods only had only %10 of all production.³⁰⁴ Domestic industry could not do much within these conditions. According to Keyder also, despite the productions process within this period could be hardly understood as industrialization, as a peripheral economy, Ottoman Empire developed other

³⁰¹Ibid. 297–299.

³⁰²Aktar, “Bursa’da Devlet ve Ekonomi,” 137.

³⁰³Keyder, *Dünya Ekonomisi İçinde Türkiye*, 80–81.

³⁰⁴Ibid. 85.

ways to stay alive within the global capitalist production network. It would not be wrong to conclude that industrialization stopped, it was moving with the whole world albeit in a different form.

Taking the secondary sources into consideration with our results obtained from occupational data analysis, regarding Bursa in 1927, we see that in fact, the alleged force de-industrialization seems to have an effect on the occupational transformation. The term 'moribund manufacturing' of Donald Quataert seems to apply here.

However, if we consider the relevant share of tertiary sectors where retail and wholesale trade as well as the rest of tertiary are the two main branches, there is in fact a remarkable development: we observe that tertiary sector has a larger share than both primary and secondary sectors. This is again, different than our expectations because although we know that between 1900 and 1920, the main city industry of Bursa, the silk industry was suffering from some abovementioned hardships. Especially during period, which started by the loss of Tripoli, followed by Balkan Wars and the First World War as well as Great Independence War between 1911 to 1923 we would expect tertiary services to stay below secondary sector i.e. the factory workers who came to work in factories go back their villages and stay within agricultural production, because food provision should have been a significant issue. Instead, Bursa had a tertiary sector expansion. This would mean that the lack of 'industrialization' in the narrow sense was only one aspect of whole economic development.

What could be reason that the city of Bursa did not occupationally dominated but primary sector activities but instead, remained firm on the tertiary sector occupations? One factor for this suggested resilience of city economy , if we assume that an enlargement in the city service industries is in fact an indicator of economic activity, this could be the enhanced transportation possibilities, although not by state but by private initiative. For instance, there were no schedules ferry service routes between Mudanya and İstanbul but there was, ironically, there was a scheduled ship route between Lyon and Mudanya.³⁰⁵ In 1892, between Mudanya-Bursa, the construction of 42km railways by the Belgian Nagelmakers company was completed.³⁰⁶ Actually, there was another project to connect Mudanya-Bursa railway line with İstanbul-Bagdat line was this has never been completed.³⁰⁷ This southern could have been crucial in order improve the transportation and hence the commercial capabilities of the city but neither foreign private initiatives have the will to do so nor the Sublime Port had the will or power to implement relevant resources for the project.

Perhaps the decline in secondary sector, observed both in the previous literature on Bursa city industry as well as our results, while resilience in the tertiary sector which we could a partial ‘de-industrialization’ could be related with the relevant transportation improvements. Whereas there were some attempts to enhance the transportation network of Bursa, especially with the inner parts of Anatolia, these projects were never to be completed. Bursa remained only partially as an active economic transportation hub while the high rate of transaction between Europe, particularly France, via sea transportation.

³⁰⁵Aktar, “Bursa’da Devlet ve Ekonomi,” 133.

³⁰⁶Faruk Üsküdari, *Eski Bursa’dan Notlar*, 1st ed. (Ankara: Türkiye Ticaret Odaları Sanayi Odaları ve Ticaret Borsaları Birliği Matbaas, 1972); cited by Aktar, “Bursa’da Devlet ve Ekonomi,” 133.

³⁰⁷Aktar, “Bursa’da Devlet ve Ekonomi,” 134.

I would like to proceed with the reconsiderations the the second theme that I have mentioned in the introductory part of this chapter, putting the city of Bursa in focus. If we recall preceding literature on Turkish industrialization between 1930 and 1945, we would observe some stylized facts. On a wide basis, it has been presumed that it was only after the era of ‘government intervention into the economic matters and took a series of initiatives that Turkey and in particular, Bursa textile industry, especially during the 50s and 60s, finally manage to find the way to industrialization³⁰⁸. The relevant government initiatives which we would call as ‘etatist movement’ were composed of, mainly, important substation policy and protective tariffs. For instance, Sümerbank, which has been established in 1933 which was providing credits for some important industry factory establishments, like Merinos wool factory or Gemlik artificial silk factory which were peripheral regions around Bursa.³⁰⁹ Due to TSK (Teşvik-i Sanayi Kanunu) that would make investments easier by some certain tax exemption the private sector also started to produce for domestic demand. The number of silk factories has risen from 2 to 12 in Bursa, from 1927 to 1941 after this law has been implemented. One should also note that the state was not actively involved in boosting raw silk industry actively, by opening new factories or etc.-The support was in form of tariffs and other measures played a side role but instead weaving and food industries were actively supported. For instance, Bursa weaving industry had a share of %22.4 within the encouraged industries that made best of the favourable terms (via Teşvik-i Sanayi)³¹⁰

Regarding this view, it would follow as a result, that a quick expansion for the secondary sector would be expected during 1930s, and since etatist turn has been deemed as a significant since

³⁰⁸*Yurt Ansiklopedisi*, 1697.

³⁰⁹Aktar, “Bursa’da Devlet ve Ekonomi,” 139.

³¹⁰*Yurt Ansiklopedisi*, 1699.

change of policy. Would these results remain to be valid if we would track the relevant changes through a particular aspect of the social structure or in other words, from the perspective of the occupational change. What does the transformation in occupational structure tell us about the etatist turn and overall results of the government led industrialization policy?

Since we know that first five year industrialization plan was put in implementation even in 1933 and related measures were taken gradually, it would not very reasonable to detect some abrupt changes regarding the data sources in our hand; Census 1935 and Census 1945. In addition to that, the industrial bases were perhaps, accumulated on the peripheral district or towns around Bursa and the city centre itself. Nevertheless, I would assume that the persons who were engaged in such secondary sector activities around Bursa, would not be totally unconnected to the city of Bursa. At least, one should see a sign of complementary tertiary sector or supportive machine building or implementation sector within the city.

If we recall the results obtained in our analysis, in 1935, there seems to be an upward curve for the secondary and very slightly, tertiary sector related occupations.³¹¹ Apparently, more people left their primary occupations for secondary sectors in from 1927 to 1935. One should also notice that secondary and tertiary sector shares were on the rise simultaneously; it was the primary sector, which released some part of its workforce to both of these sectors. When we come to 1945, we see the further decline in the numbers of persons who were engaged in primary sector related activities.

³¹¹ As I have indicated previously, regarding the case of Bursa and Ankara, in order to boost reliability measures of this analysis, only working and total male population rates would be considered as the main indicator of the occupational transformation. Females rates were subject to measurement problems stemming from the data sources in our hand and hence, would not be deemed as reliable.

Despite the fact that we observe an upward trend between 1927 and 1945 in relation to decline in the primary sector activities and rise in the secondary and tertiary sector ones, the rate of this transformation would not be labelled as ‘aggressive’ In fact, between 1935 and 1945, the allocation of occupational structure does not change at all. The only considerable difference is that in Bursa, only the share of the people who had an occupation under textiles and clothing and in addition to that, administrative and public services in the tertiary sector sphere. It is interesting that this amount is almost equal to number of persons who had their occupations within tertiary sector and especially commerce.

Regarding this gradual rate of occupational transformation, could we say something about the overall success rate of the state economic initiatives? Has Bursa been put on the ‘industrialization’ track by the alleged impulses, according to our analysis of occupational transformation? Our answer would not be in affirmative tone when we look at the results in hand. Between 1927 and 1945, with the exception of some marginal changes in the secondary and tertiary sector and in particular, textiles and clothing industry, the occupational structure of the city of Bursa, remained more or less the same.

This conclusion that I have reached has a place in the preceding literature as well. According to Fahri Dalsar, state intervened into silk industry in order to 1940 since from 1936-40 relevant productivity has fallen and this gave partially satisfactory results, especially in the weaving industry improved.³¹² However, after 1944 productivity would fall again and the relevant improvements would lose the momentum and towards 1950, would follow a falling

³¹²Dalsar, *Türk Sanayi ve Ticaret Tarihinde Bursa’da İpekçilik*, 476–477.

trend.³¹³Therefore, for Dalsar, despite all efforts under the new measures of the etatist turn, Turkish silk industry would never get back to its high shares among the world silk producers and would struggle to penetrate into silk world market in the Japanese dominance. ³¹⁴ The silk production level would peak in 1938 regarding the period between the two World Wars; however, this would be still be one third of pre-war level. ³¹⁵ A real recuperation was never possible. Government led industrialization attempts were not proved to be successful.

Despite the fact that between 1935 and 1945, there was an absolute rise in the amount of persons who had their occupations which were related with factory production like textiles iron-steel, machine-tool and clothing, this was not as impressive as one would expect them to be. Overall, this picture tells us one thing about the economic developments during 1935-1945: despite the initial sparkling the heavy scale industrialization leap has not been achieved. However it would be wrong the economic activity and occupational transformation of Bursa has been stopped overall. The labour force of Bursa has been more inclined to have tertiary sector occupations as it have been as a result of an industrialization progress in the orthodox sense but here, it has been revealed that such a heavy-scale industrialization is not existent. Other reasons should be playing a role for the expanding tertiary sector while decreasing primary sector and stagnant secondary sector.

³¹³ Ibid. 478–484.

³¹⁴ Ibid, 476.

³¹⁵Quataert, “The Silk Industry of Bursa, 1880-1914,” 299.

Verdict: Occupational Transformation in Bursa: 1845-1945

In this section we gave an attempt to check two alleged phenomena regarding Ottoman and Turkish industrialization process via transformation in the occupational structure, in the city of Bursa.

In 1845, where Bursa silk industry was only midst of the process of being integrated into the global silk manufacturing production, the low figures of people engaged in agriculture was rather surprising for us. It has been known that Ottoman Empire was largely rural and there were no signs of full-scale industrialization before mid-19th century. Despite all, even though we must acknowledge the limitations of 1945 tax records as well as Bursa being a relatively more urbanized centre which has strong commercial networks historically, this figure was remarkable. The tertiary sector was again, unexpectedly high and the sector itself was not administratively dominated; merchants and craftsman were a significant part of tertiary sector. This finding also urges the researcher to review previous literature on Ottoman 19th century because the defining industrialization process may have started way before than it has already thought to be as the large tertiary and low primary sector indicates. One reason could be the positive effects of urbanization. The historical strong silk industry basis of Bursa could also be a factor

Coming to 1927, there could be observed a decline in the shares of secondary sector regarding among all occupations and primary sector shares were on the rise. This finding is compatible with earlier claims of de-industrialization since accordingly, after the 1870s, the Ottoman manufacturing has been virtually disappeared. However, despite a non-decreasing agricultural

share, tertiary sector has remained active and appears to have a great weight among other occupations. The service-related occupations could have been stayed alive despite the wars and all the hardships, particularly due to enhanced transportation possibilities. This would induce us to conclude that the forces of deindustrialization, that is, a turn back to more primary sector, raw material extraction oriented activities were partially, in power. These would have deleterious effects on the secondary sector shares while tertiary sector shares would remain resilient.

From 1935 to 1945, it has been earlier claimed that etatism was in charge and therefore, the first steps into full-scale industrialization was taken at this point. Despite in the first years, there seems to be an occupational transformation from agriculture to secondary sector, our results does not imply the presumptions of the earlier literature. Despite the state initiatives, from 1935 to 1945, there was only limited increase in the secondary sector shares while tertiary sector remains almost in the same level. The limitations of etatist initiative has been reflected in the occupational structure as a different type of industrialization experience.

Occupational Transformation in the City of Ankara: 1845-1945

General Facts: Ankara

Traditionally, thanks to its favourable geographical location, Ankara emerged as sort of provincial centre since the beginnings of 15th and 16th century and enjoyed a relatively lively commercial life throughout centuries.³¹⁶ Being placed in the Central Anatolian circle, encircled by high mountains, Ankara had obvious advantages; in the very simple military terms, the city was relatively easier to defend and safe, which would make economic activities to develop more easily. Perhaps most of all, the city of Ankara has been on the way of commercial transportation ways, regarding Western to Eastern trade as well as immigration ways.³¹⁷ We could briefly comment that Ankara was a bridge between East-West immigration roads and the combination of all these features provides the city a surprising continuity throughout the ages.³¹⁸

According to Sevgi Aktüre, while 17th century, the fortress and city walls induced Ankara to stay as a ‘closed production and trade centre’, while as soon as the city was turned into a ‘country level administrative centre’, southern expansion transformed Ankara into an open city.³¹⁹ With this continuity aspect on the background, the city of Ankara, until 19th century has kept its importance due to critical position on the transit trade ways, despite general crisis in

³¹⁶Yurt Ansiklopedisi, 540.

³¹⁷ Abraham Galanti, *Ankara Tarihi* (Istanbul: Tan Matbaası, 1950); cited by Tuğrul Akçura, *Ankara: Türkiye Cumhuriyeti'nin başkenti hakkında monografik bir araştırma*, no. 16 (Ankara: Middle East Technical University, Architecture Faculty, 1971), 9.

³¹⁸Vital Cuinet, *La Turquie d'Asie: Géographie Administrative, Statistique* (Paris: ELeroux, 1890); cited by Akçura, *Ankara..*

³¹⁹Sevgi Aktüre, “1830’dan 1930’a Ankara’da Günlük Yaşam,” in *Tarih İçinde Ankara II: Aralık 1998 Seminer Bildirileri*, ed. Yıldırım Yavuz, Ankaralılar Vakfı, and Ankara Sanayi Odası (Ankara: Middle East Technical University, 2001), 35.

Ottoman territory 17th century and Celali revolts.³²⁰Historically, especially regarding 16th and 17th centuries, industrial production in Ankara was based on animal husbandry. The most prominent branch of this industry was tiftik goat based şali (scarf) weaving. Tiftik weaving was integrated to global market and Ankara, as a city was standing in the centre of this industry, having almost a monopolistic power.³²¹

According to Sevgi Aktüre, while in the 18th century, there were 50 villages and the peasant population were make a living by tiftik spinning, sold as ‘çile’ (skein). Beypazarı was the main centre of this production. Referring from another source, Aktüre reminds us that the merchants from İstanbul and İzmir gave a great deal of importance for the products exported from Ankara. 20.900 top sof (wool) and şal(textile) were produced per annum and around 60 ton tiftik(angora goat) yarn was exported to other cities and regions.³²²

Due to successful tariff policy imposed by Sublime Port, tiftik production has been retained throughout the first part of 19th century. According to a source in 1812, there were 10,000 tiftik(mouir or angora goat) producer and 1000 looms were from tiftiks, yarns were rolled and there was also textile manufacturing.³²³ The production of fabric has declined by nearly half when compared to 18th century however it was still the main source of revenues for the city.

³²⁰Akçura, *Ankara*, 18.

³²¹Tekeli, *Sanayi Toplumu İçin Sanayi Yazıları*, 130.

³²² Halil Sahillioglu, “XVIII. Yüzyıl Ortalarında Sanayi Bölgelerimiz ve Ticari İmkanları,” *Belgelerle Türk Tarihi Dergisi* 2, no. 11 (1968): 61–66; cited by Aktüre, “Tarih İçinde Ankara,” 37.

³²³ Seçil Akgün, Erdal Yavuz, and Ümit Nevzat Uğurel, eds., *Tarih İçinde Ankara: Eylül 1981 Seminer Bildirileri* (Ankara: Orta Doğu Teknik Üniversitesi, 1984), 19.

³²⁴ It could be inferred that for Ottoman state, the deprivation was due to lack of raw material and therefore, they have issued an edict that would prohibit the sale of special kind of yarn to İzmir merchants. ³²⁵

There were some documents which we can learn more about some figures and numbers of the occupational structure before 1845. Recorded on a tax document of 1827, we know that there were 546 şalcıyan (chally weaver), 9 tiktifciyan (tikfik seller) 4 tiftik painter, 42 linen painter, 19 row fabric weaver (çulhadar) and 193 bezzazan(linen seller). When we come to 1830, in the general census, Aktüre remarks the significant decline in the numbers of weavers and textile manufacturers: there remained only 2 şalcı (chally weaver), total painters 11, fabric weaver (çulhadar) 1 and linen seller to 2. ³²⁶

Same kind of a decline could be depicted for the dikiciyan, shoemakers. The numbers of shoemakers was 239 in 1827 and shoe sellers (haffaf or kaffaf) 39, in 1830 these were also down to 28 and 10. ³²⁷ However, while the amount of manufacturing products were in decline in general, between 1827 and 1830 there was a significant rise of the numbers of butchers. (From 13 to 30) ³²⁸ For Aktüre, this increment, did not appear as an increase in the internal demand but instead, it was external based. In this way, she hints that 1838 Treaty and the

³²⁴Rifat Özdemir, *XIX. Yüzyılın İlk Yarısında Ankara: Fizikî, Demografik, idarî, ve Sosyo-Ekonomik Yapısı, 1785-1840*, 2. baskı, Kültür Eserler Dizisi 694. 59 (Ankara: Kültür Bakanlığı, 1998), 238 the relevant figure of can be found in Ankara Şer'îye Sicili Defter No: 218 Belge no: 294.

³²⁵ Ibid, 151.

³²⁶Musa Çadırcı, "1830 Genel Sayımına Göre Ankara Şehir Merkezi Nüfusu Üzerinde Bir Araştırma," *Osmanlı Araştırmaları* 1, no. 1 (1980): 118–120.

³²⁷Halit Ongan, "Ankara'nın Eski Esnafını Açıklayan Bir Vesika," *Türk Etnografya Dergisi*, no. 2 (1957): 229.

³²⁸Ibid. 58; Çadırcı, "1830 Genel Sayımına Göre Ankara Şehir Merkezi Nüfusu Üzerinde Bir Araştırma," 38.

succeeding treaties of commerce could be an explanation for the continuity of this pattern and therefore, suggests a direct relation between de-industrialization with Baltalimanı Treaty.

Therefore, regarding Ankara, as well as Bursa, background literature tells us that Ankara had a strong base of textile production historically and more than that, it was an important hub for east-west connection, in the middle of Anatolia. It has been earlier assumed that largely, de-industrialization has made the relating economic activity within secondary sector diminish

Our next task would be to track population and occupational change between 1845 and 1945 and check whether the results could tell us any new things about the process of industrialization in the city of Ankara while 'de-industrialization' and 'etatism' themes on the background.

Result and Analysis: Ankara

Population Change in Ankara 1845-1945

Table 45-Ankara 1845 Population Gender Allocation

ANKARA 1845 (# numbers,% shares)	MALE #	MALE %
NON-WORKING POPULATION	9471	76%
WORKING POPULATION	3029	24%
TOTAL POPULATION	12500	100%

Chart 173- Ankara 1845 Population Gender Allocation

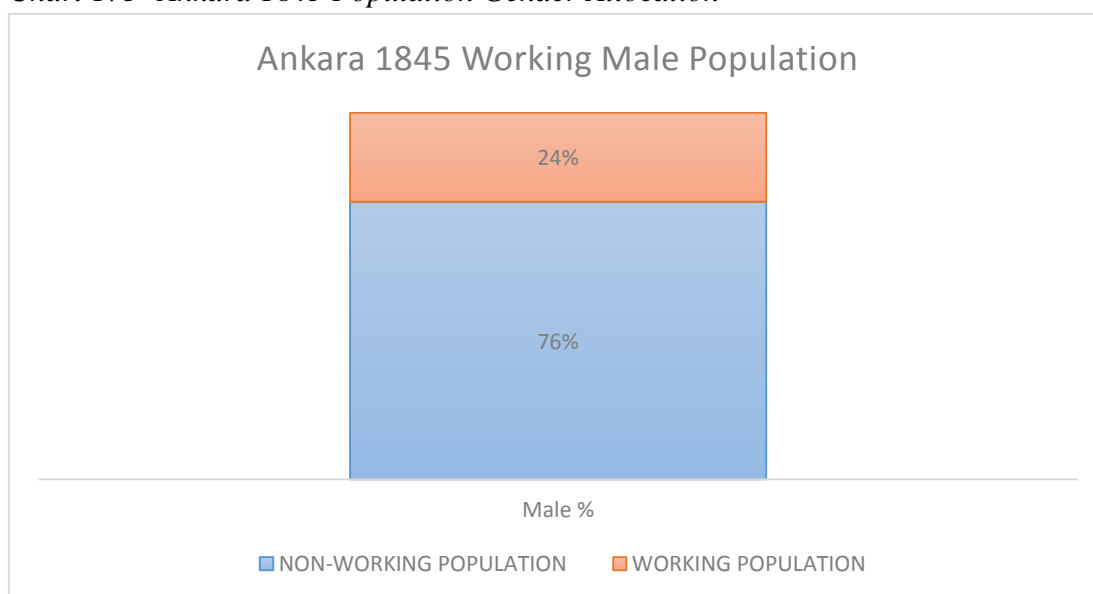


Table 46- Ankara 1927 Population Gender Allocation

ANKARA 1927 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %	ANKARA 1927	MALE %	FEMALE %
NON-WORKING POPULATION	11402	23948	35350	23%	95%	47%	NON-WORKING POPULATION	32%	68%
WORKING POPULATION	37946	1257	39203	77%	5%	53%	WORKING POPULATION	97%	3%
TOTAL POPULATION	49348	25205	74553	100%	100%	100%	TOTAL POPULATION	66%	34%

Chart 174- Ankara 1927 Population Gender Allocation

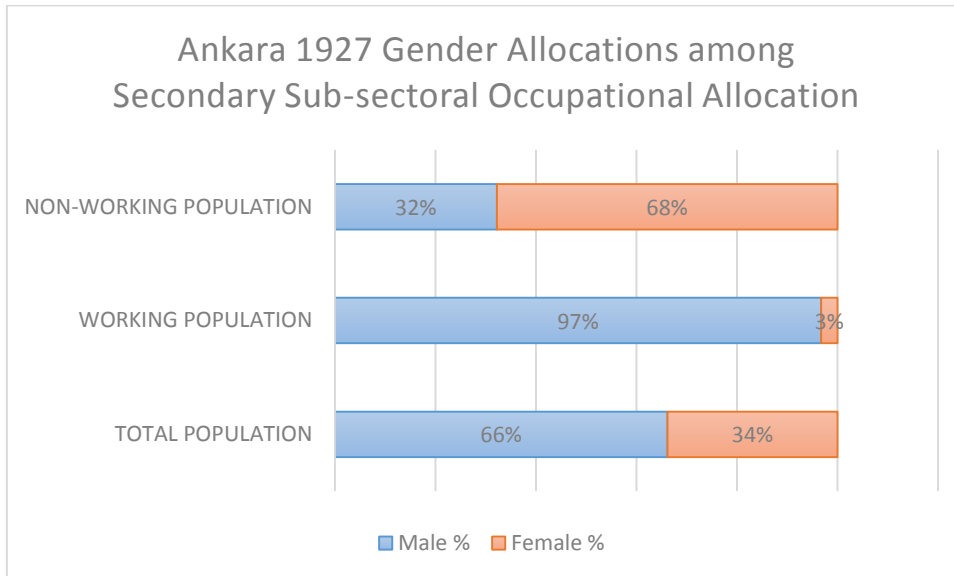


Table 47- Ankara 1935 Population Gender Allocation

ANKARA 1935 numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %	ANKARA 1935	MALE %	FEMALE %
NON-WORKING POPULATION	15824	15073	30897	21%	31%	25%	NON-WORKING POPULATION	51%	49%
WORKING POPULATION	58985	32838	91823	79%	69%	75%	WORKING POPULATION	64%	36%
TOTAL POPULATION	74809	47911	122720	100%	100%	100%	TOTAL POPULATION	61%	39%

Chart 175- Ankara 1935 Population Gender Allocation

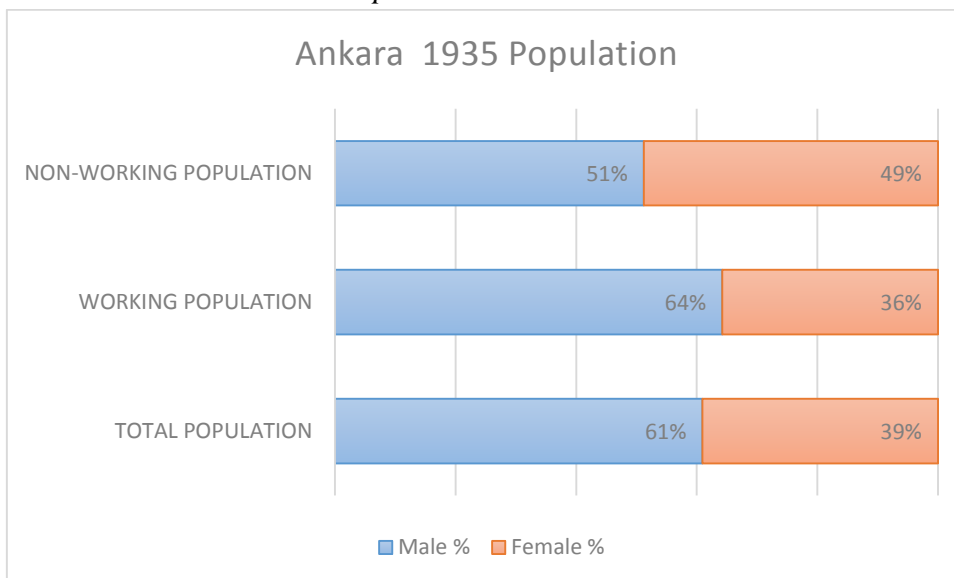
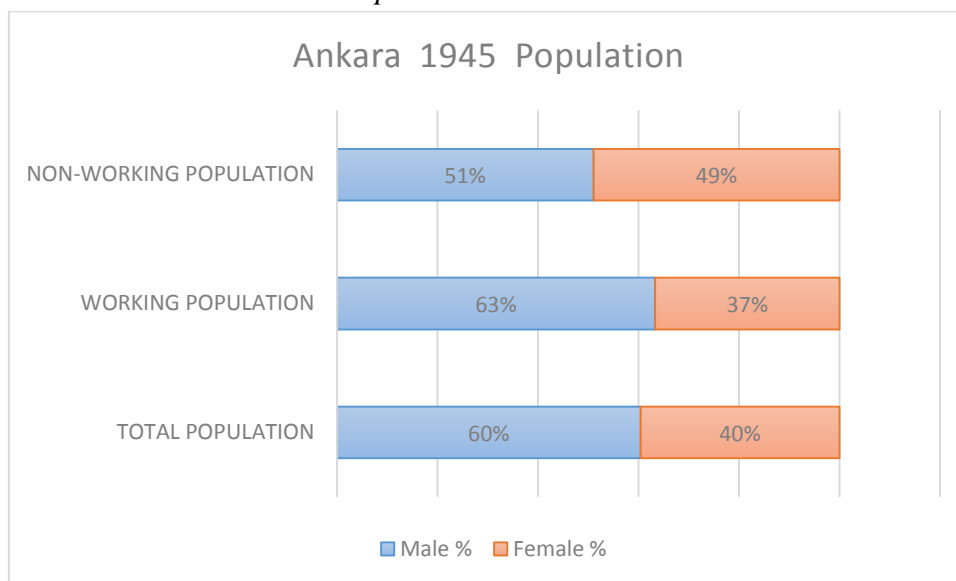


Table 48- Ankara 1945 Population Gender Allocation

ANKARA 1945 numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH S %	ANKARA 1945	MALE %	FEMALE %
NON-WORKING POPULATION	27274	26137	53411	20%	29%	24%	NON-WORKING POPULATION	51%	49%
WORKING POPULATION	109784	63517	173301	80%	71%	76%	WORKING POPULATION	63%	37%
TOTAL POPULATION	137058	89654	226712	100%	100%	100%	TOTAL POPULATION	60%	40%

Chart 176- Ankara 1945 Population Gender Allocation



General Outlook: 1845-1945

Table 49- Ankara 1927-1945 Population Growth Rates

ANKARA (# numbers)	1845 MALE	1927 MALE	1927 FEMALE	1927 BOTH	1935 MALE	1935 FEMALE	1935 BOTH	1945 MALE	1945 FEMALE	1945 BOTH
NON-WORKING POPULATION	21971	11402	23948	35350	15824	15073	30897	27274	26137	53411
WORKING POPULATION	3029	37946	1257	39203	58985	32838	91823	109784	63517	173301
TOTAL POPULATION	125000	49348	25205	74553	74809	47911	122720	137058	89654	226712
LABOR PARTICIPATION RATES	%12	77%	5%	53%	79%	69%	75%	80%	71%	76%

Chart 177- Ankara 1927-1945 Male Population-Labour Participation Rates

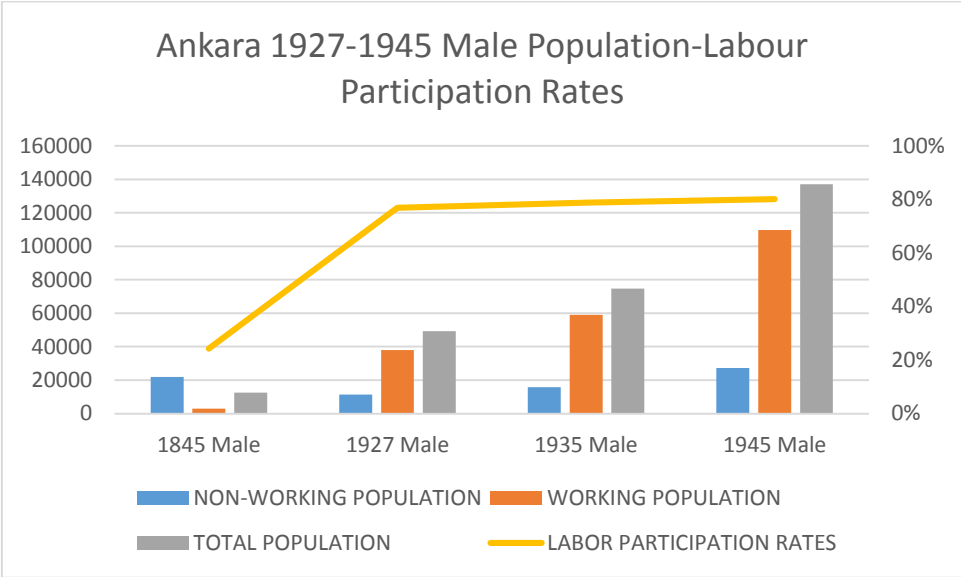


Chart 178- Ankara 1927-1945 Female Population-Labour Participation Rates

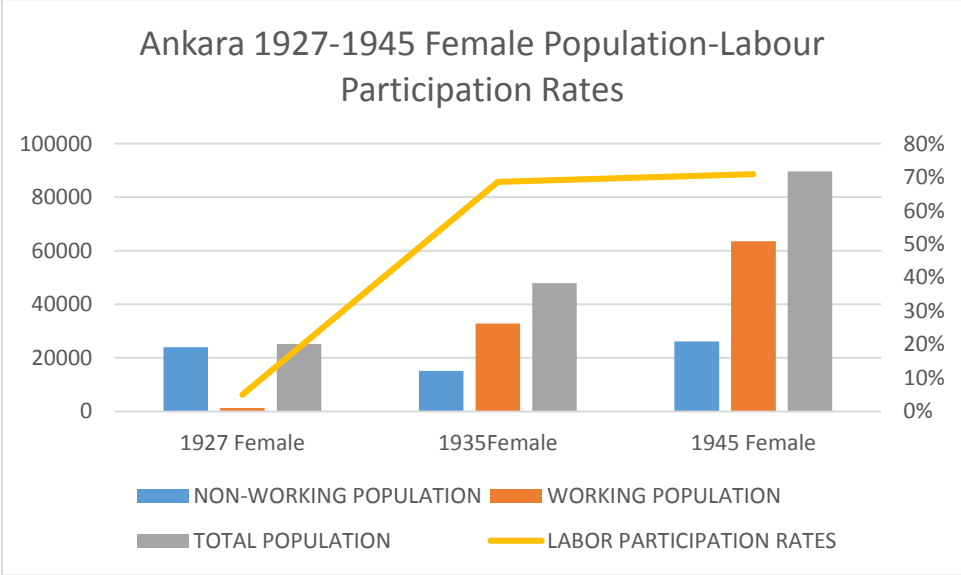
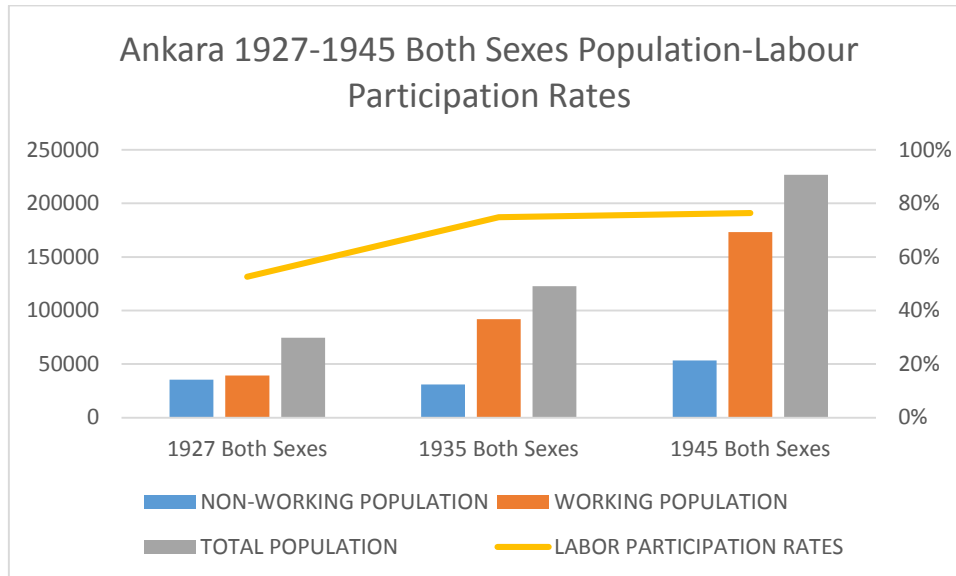


Chart 179-Ankara 1927-1945 Both Sexes Population-Labour Participation Rates



Summary of Charts: Ankara 1845-1945 Population Change

In 1845, working male population in the city Ankara was 3029 and this was around %20 of total male population. ³²⁹We could not mention about working female population rates simply because we cannot depict them from the 1845 Temettuat records.

Coming to 1927, we could observe that total population reaches almost 75000 while %66 of them were males. While female share in the total population is only %33, it would be hard to take these census records as reliable. Accordingly, %97 of working population was consisted of males and this was, unrealistic.

³²⁹ In 1830, according to 1830 Population Census, Ankara had a population of roughly 25,000. Upon this, I have taken total male population as 12,500.

When we come to 1935, we reach more reasonable results regarding the gender differences. Total population is over 122,000 while males make up %61 of the total population. Working population is still dominated by males by %64.

Reaching to 1945, population increase continued with an accelerating rate and the total population of the city of Ankara has reached to 226,000 while gender balances among the total as well as working population, stayed almost same around %60-%40.

From 1845 to 1945, we observe a constant rise in the total and working population amounts for both males and females. Female labor participation rates could be only reckoned after 1935 since before this date, earlier census records do not reveal much. Nevertheless, one could suggest that city population of Ankara between 1845 and 1945 has increased continuously and the rate was further accelerated between 1935 and 1945 particularly. Meanwhile, city population as well as workforce remain male dominated by a ratio around %60-%40.

Sectoral Occupational Transformation in Ankara: 1845-1945

Table 50-Ankara 1845 Working Population Occupational Allocation

ANKARA 1845 (# numbers,% shares)	MALE #	MALE %
PRIMARY	241	2%
SECONDARY	1003	8%
TERTIARY DEALERS	89	1%
TERTIARY SELLERS	77	1%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	595	5%
TRANSPORT AND COMMUNICATIONS	98	1%
SECTORALLY UNSPECIFIC	329	3%
WITHOUT OCCUPATION OR UNSTATED	597	5%
WORKING POPULATION	3029	24%
NON-WORKING POPULATION	9471	76%
TOTAL POPULATION	12500	100%

Chart 180- Ankara 1845 Total Population, Sectoral Occupational Allocation

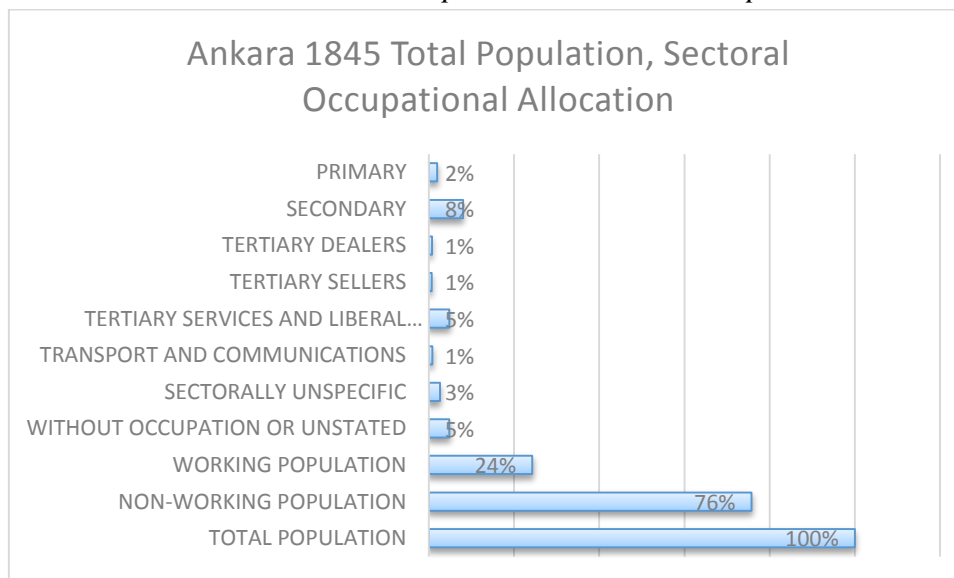
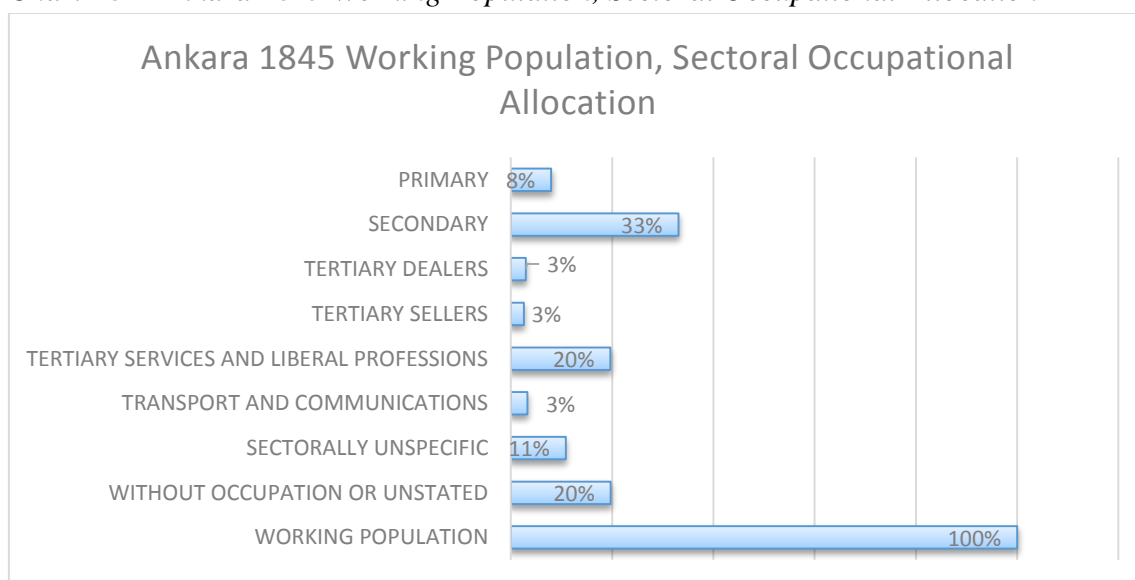


Table 51- Ankara 1845 Working Population, Sectoral Occupational Allocation

ANKARA 1845 (# numbers,% shares)	MALE#	FEMALE %
PRIMARY	241	8%
SECONDARY	1003	33%
TERTIARY DEALERS	89	3%
TERTIARY SELLERS	77	3%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	595	20%
TRANSPORT AND COMMUNICATIONS	98	3%
SECTORALLY UNSPECIFIC	329	11%
WITHOUT OCCUPATION OR UNSTATED	597	20%
WORKING POPULATION	3029	100%

Chart 181- Ankara 1845 Working Population, Sectoral Occupational Allocation



Summary of Charts: Ankara 1845 Sectoral Occupational Allocation

Regarding 1845 working male population of Ankara, secondary sector has the first place in shares among all other PSTI sectors with %33. While tertiary services and liberal professions have remarkable prominence, there are considerable shares of primary sector along with tertiary dealers and sellers. Nevertheless, working male population make only %24 of total male population which undermines the analysis.

Table 52-Ankara 1927 Total Population Sectoral Occupational Allocation

ANKARA 1927 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	9799	620	10419	20%	2%	14%
SECONDARY	6667	108	6775	14%	0%	9%
RETAIL AND WHOLESALE	4707	106	4813	10%	0%	6%
REST OF TERTIARY	16773	423	17196	34%	2%	23%
NON-WORKING POPULATION	11402	23948	35350	23%	95%	47%
WORKING POPULATION	37946	1257	39203	77%	5%	53%
TOTAL POPULATION	49348	25205	74553	100%	100%	100%

Chart 182-Ankara 1927 Total Population Occupational Allocation

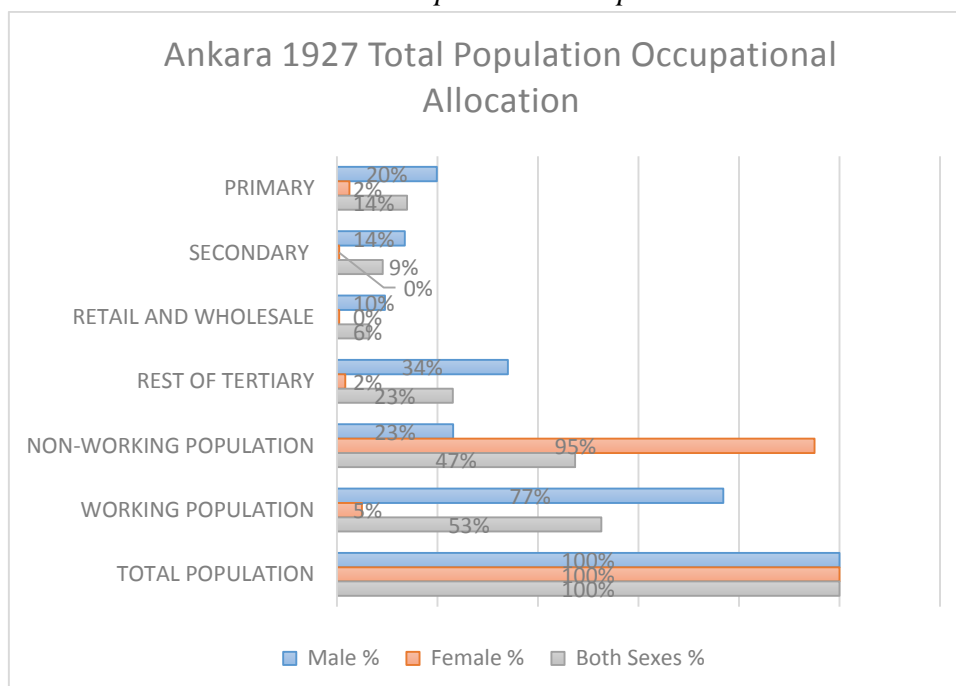


Table 53-Ankara 1927 Working Population Sectoral Occupational Allocation

ANKARA 1927 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	9799	620	10419	26%	49%	27%
SECONDARY	6667	108	6775	18%	9%	17%
RETAIL AND WHOLESALE	4707	106	4813	12%	8%	12%
REST OF TERTIARY	16773	423	17196	44%	34%	44%
WORKING POPULATION	37946	1257	39203	100%	100%	100%

Chart 183-Ankara 1927 Working Population Sectoral Occupational Allocation

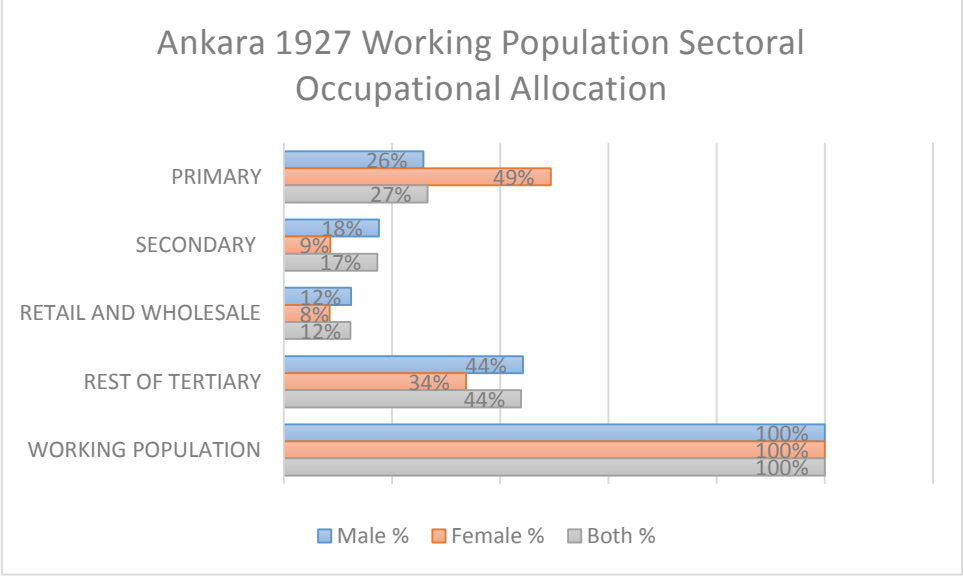
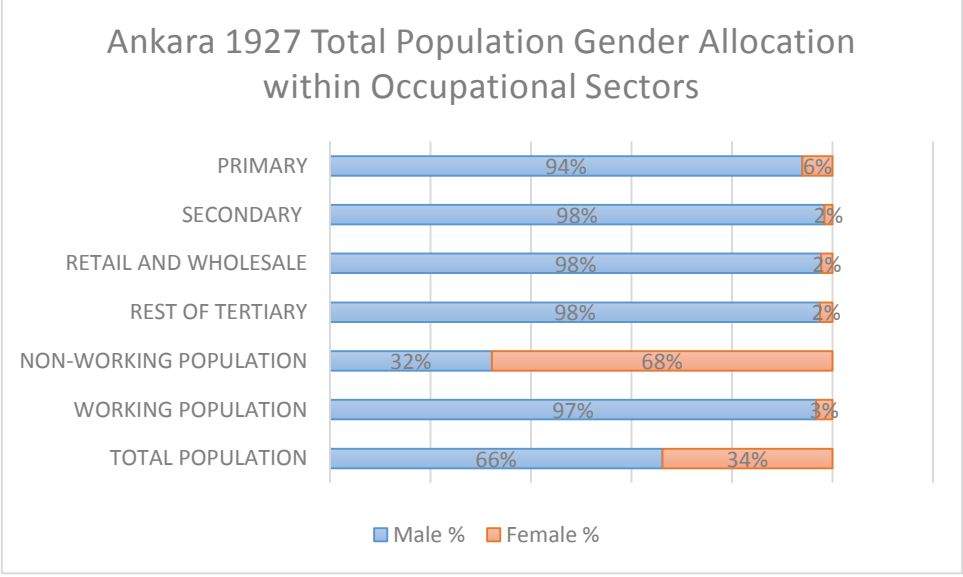


Chart 184- Ankara 1927 Total Population Gender Allocation within Occupational Sectors



Summary of Charts Ankara 1927 Sectoral Occupational Allocation

Regarding 1927, among total population, tertiary sector appears as the most prominent PSTI sector among all others by %32. Secondary sector follows with %9 and tertiary dealers and sellers with %9.

In 1927, working population appears as %53 of total population however; the rate has been pulled down by abnormally non-working population rate among females. If we only consider male working population, the working population is %77 of total male population and such high rate is also not very reasonable.

Nevertheless, among working population, tertiary sector, with tertiary sellers and dealers as well as the rest of tertiary sector, has almost more than %50 of working male population. Primary sector is the second most prominent sector among working males with a share of %26 while secondary sector has %18 of working males.

Looking at gender differences among each individual sector, we would observe that in almost all sectors, males are more dominant than females. Not much information that we can get by looking at this aspect of gender allocation among PSTI sectors for Ankara, according to census records of 1926.

Table 54-Ankara 1935 Total Population Sectoral Occupational Allocation

ANKARA 1935 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	4958	457	5415	7%	1%	4%
SECONDARY	16732	845	17577	22%	2%	14%
TERTIARY DEALERS&SELLERS	6230	477	6707	8%	1%	5%
TERTIARY SERVICES&PROFESSIONS	20290	2588	22878	27%	5%	19%
TRANSPORT&COMMUNICATIONS	4101	99	4200	5%	0%	3%
WITHOUT OCCUPATION OR UNSTATED	6674	28372	35046	9%	59%	29%
NON-WORKING POPULATION	15824	15073	30897	21%	31%	25%
WORKING POPULATION	58985	32838	91823	79%	69%	75%
TOTAL POPULATION	74809	47911	122720	100%	100%	100%

Chart 185-Ankara 1935 Total Population Sectoral Occupational Allocation

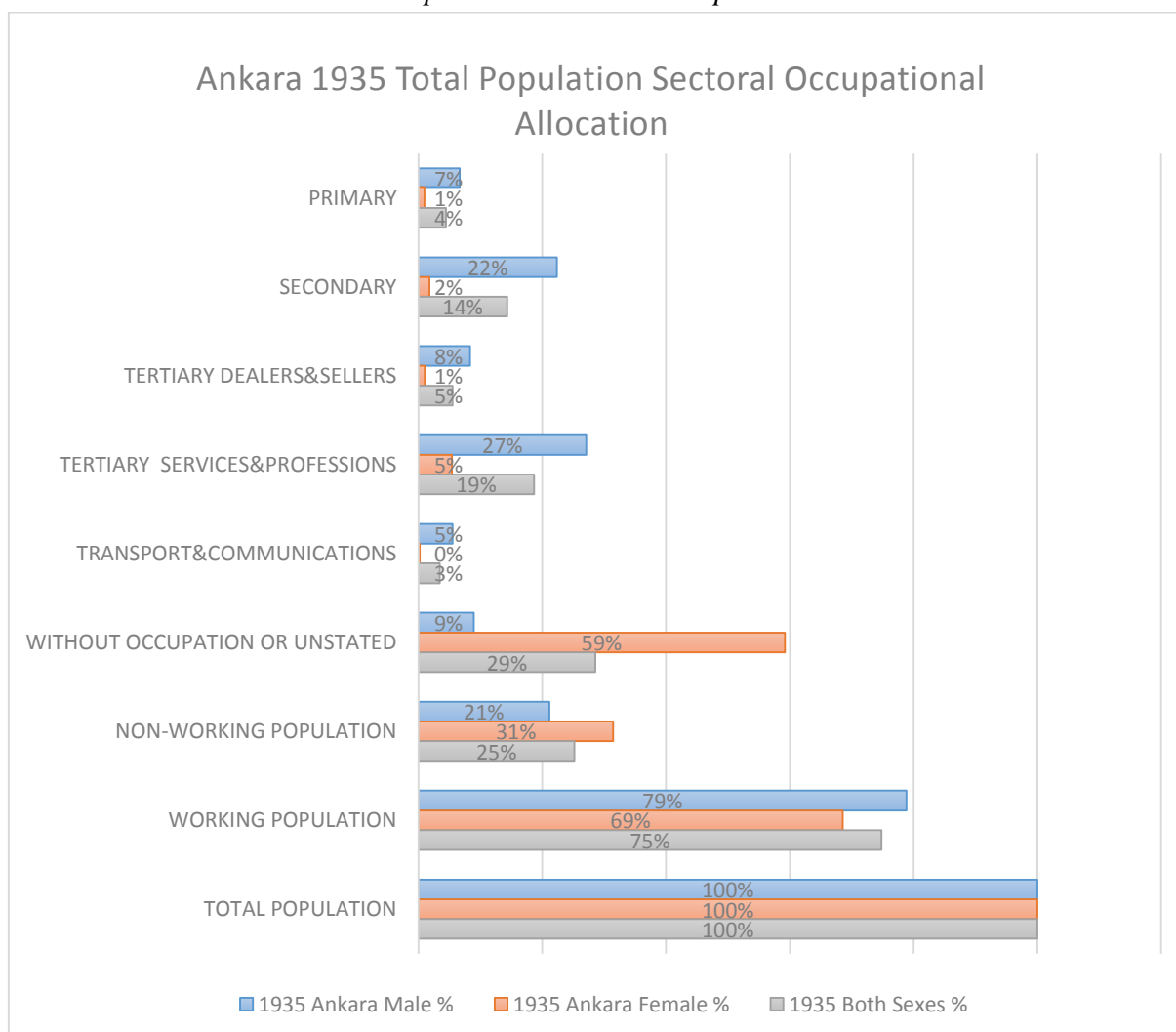


Chart 186- Ankara 1935 Working Population Sectoral Occupational Allocation

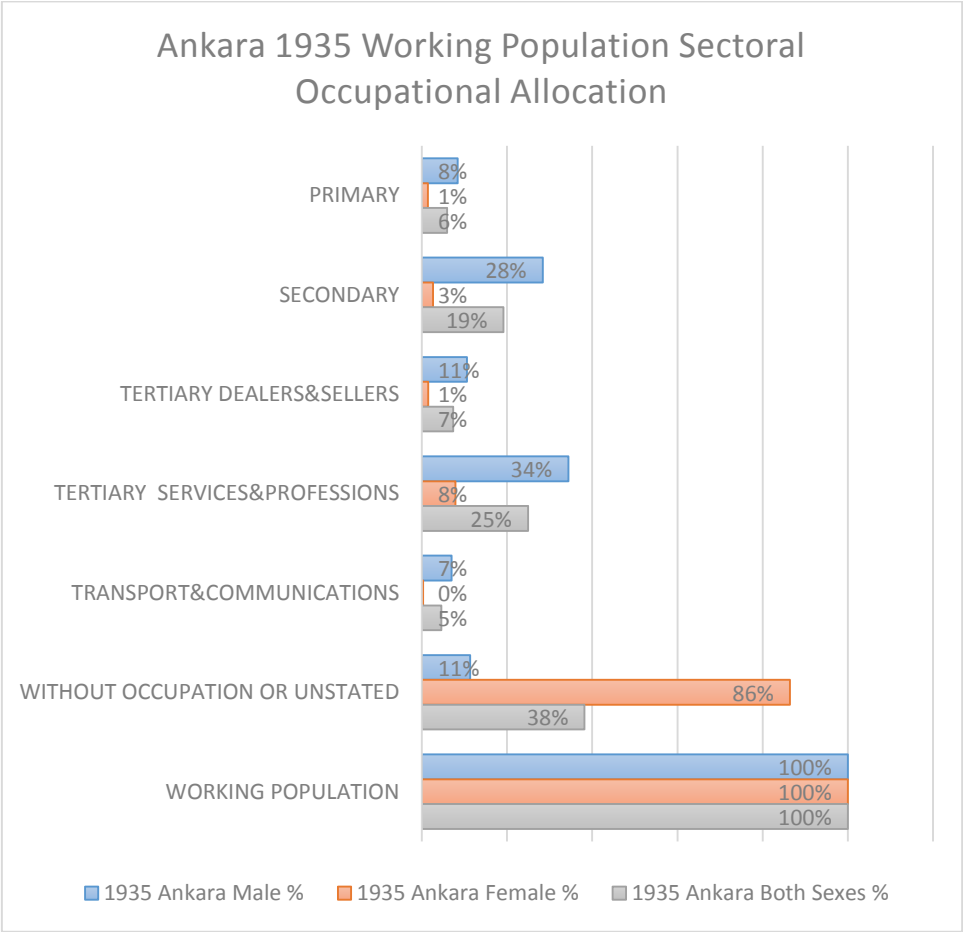
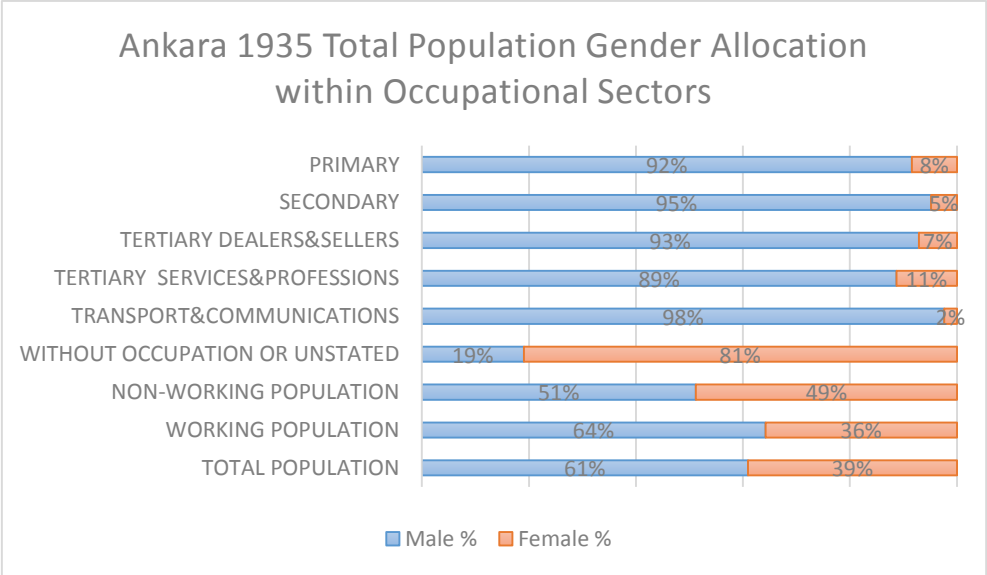


Chart 187-Ankara 1935 Total Population Gender Allocation within Occupational Sectors



Summary of Charts: Ankara 1935 Sectoral Occupational Allocation

According to the results obtained from our analysis relating to Census records of 1935, Ankara is a tertiary sector dominated city in terms of PSTI classification occupational shares. Among the tertiary sector branches, tertiary services and professions come as the leading sector while %27 of total population has been classified under this particular PSTI sector. Secondary sector has %14 of all total population while primary sector stays under %10 in shares.

Our results tell us that working population rate is around %75 while males are above (%79) and females are below (%69) of this rate. Labor participation rates are therefore seems reasonable.

Among males, %34 of the working population is classified under tertiary services and professions while along with transport and communication (%7) and tertiary dealers and sellers(%11), tertiary sector has almost half of the working male population while secondary sector has %28 and primary sector %8 of working male population.

Our results do not tell much about female occupational structure in Ankara 1935, since the majority of females (%86) were classified under ‘without occupation or unstated’ title which makes further analysis almost impossible.

Table 55- Ankara 1945 Total Population Sectoral Occupational Allocation

1945 ANKARA (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
PRIMARY	5766	161	5927	4%	0%	3%
SECONDARY	19723	1168	20891	14%	1%	9%
TERTIARY DEALERS&SELLERS	10569	1157	11726	8%	1%	5%
TERTIARY SERVICES & PROFESSIONS	45650	6052	51702	33%	7%	23%
TRANSPORT&COMMUNICATIONS	6666	490	7156	5%	1%	3%
WITHOUT OCCUPATION OR UNSTATED	21410	54489	75899	16%	61%	33%
NON-WORKING POPULATION	27274	26137	53411	20%	29%	24%
WORKING POPULATION	109784	63517	173301	80%	71%	76%
TOTAL POPULATION	137058	89654	226712	100%	100%	100%

Chart 188- Ankara 1945 Total Population Sectoral Occupational Allocation

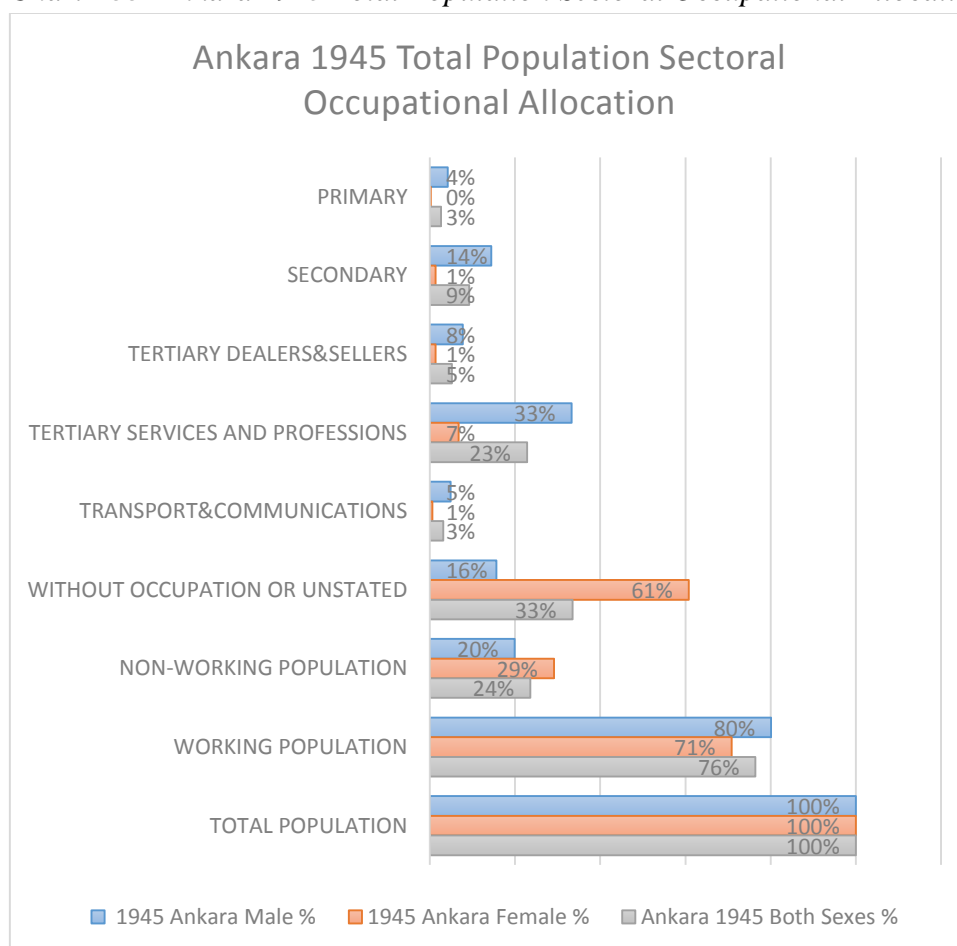


Chart 189- Ankara 1945 Total Population Sectoral Occupational Allocation

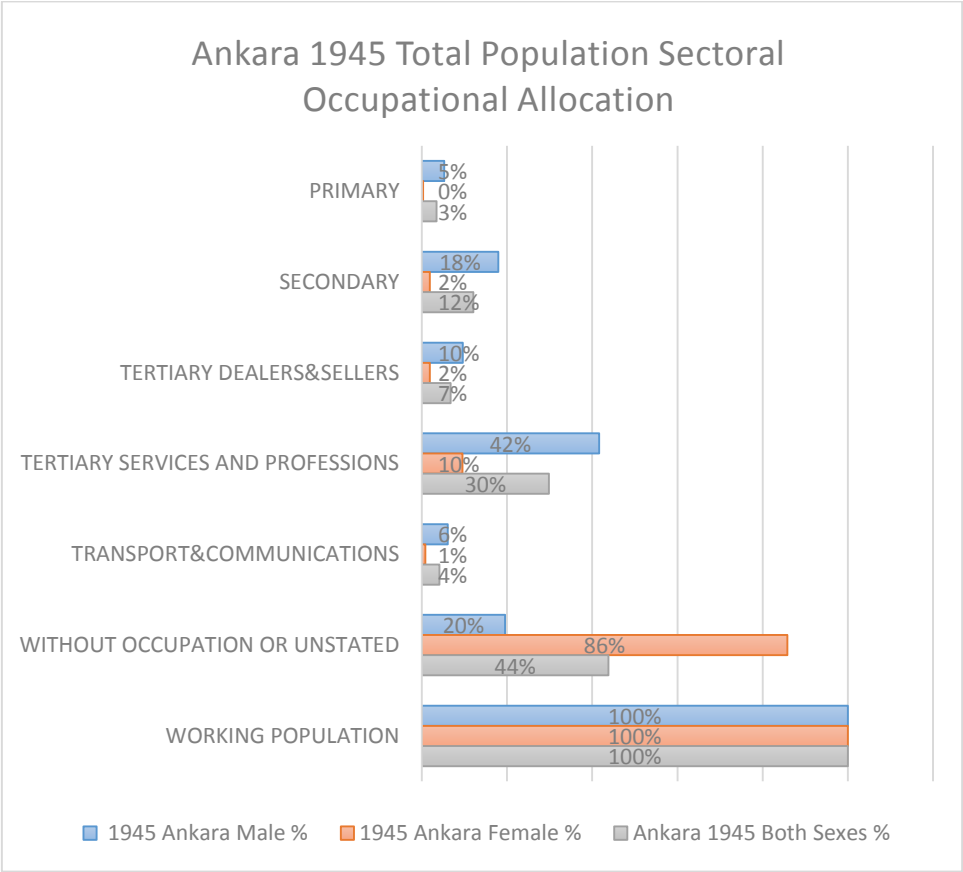
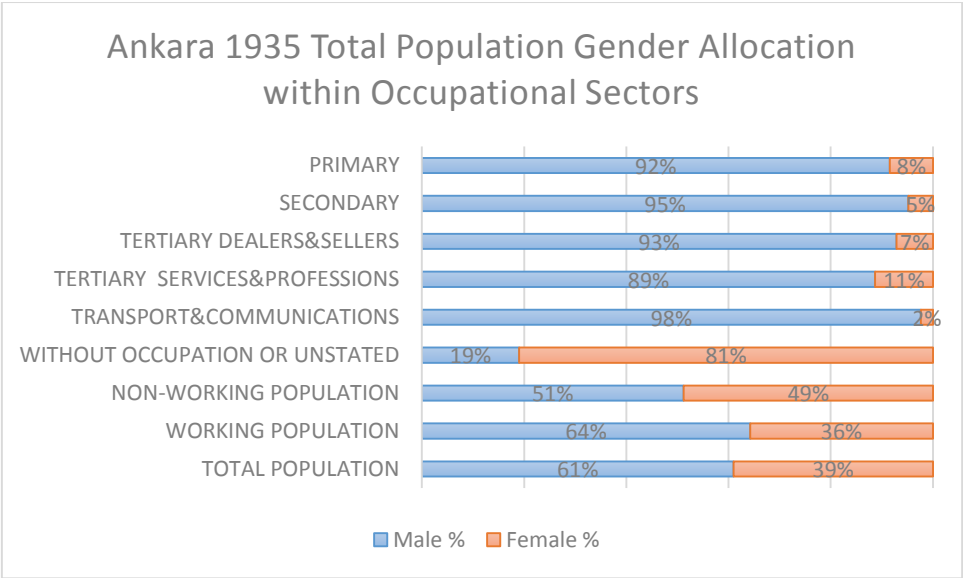


Chart 190- Ankara 1935 Total Population Gender Allocation within Occupational Sectors



Summary of Charts: Ankara 1945 Sectoral Occupational Allocation

When we come to 1945, we observe that tertiary sector has almost %31 of total population. Primary and secondary sector, together, do not add up %20 of total population. Working population rate among males reach to %80 while for females, the same rate is %71.

Regarding working males, the share of tertiary sector has almost reach %60 while tertiary services and professions make %42 of this rate. Secondary sector has a share %28 among working males.

Among working females, further analysis would not mean much since %86 of working females were classified as 'without occupation or unstated'.

General Outlook: Ankara Sectoral Occupational Transformation 1845-1945

Chart 191- Ankara 1845-1945 Total Population, Males, Sectoral Occupational Shift

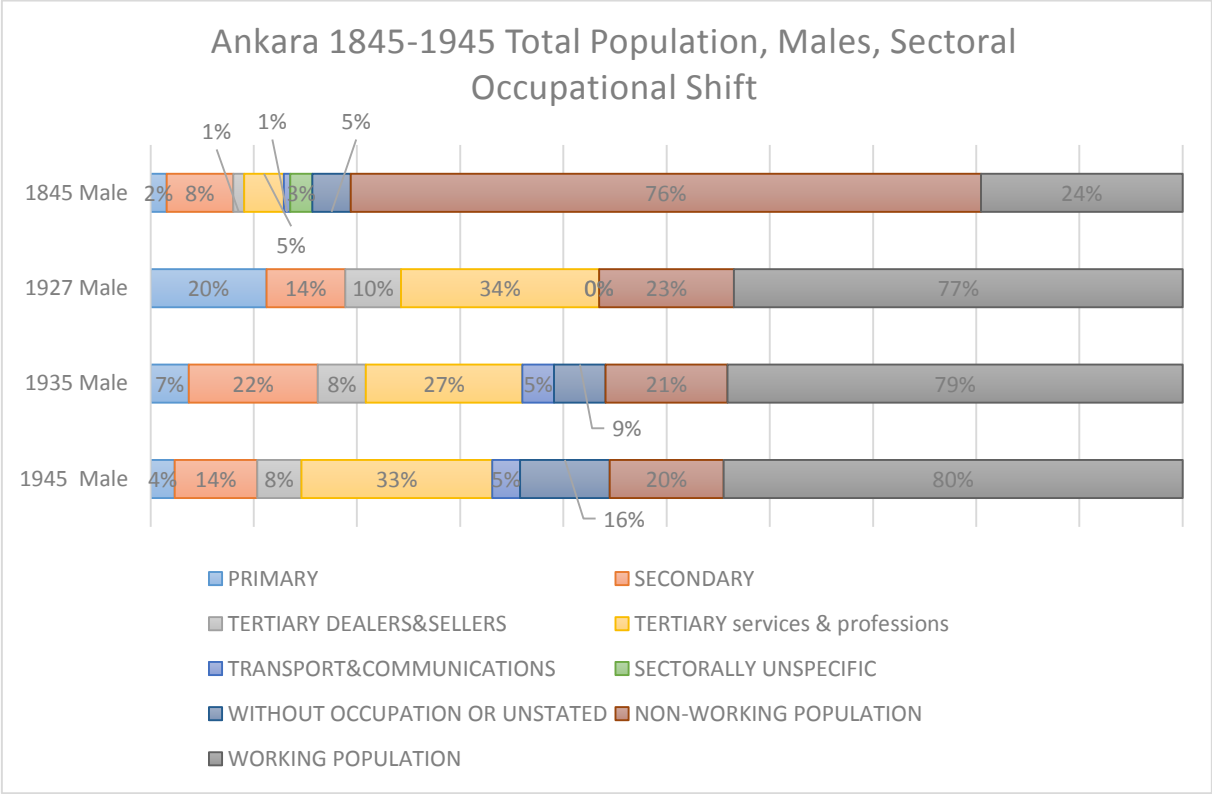


Chart 192- Ankara 1845-1945 Working Population, Males, Sectoral Occupational Shift

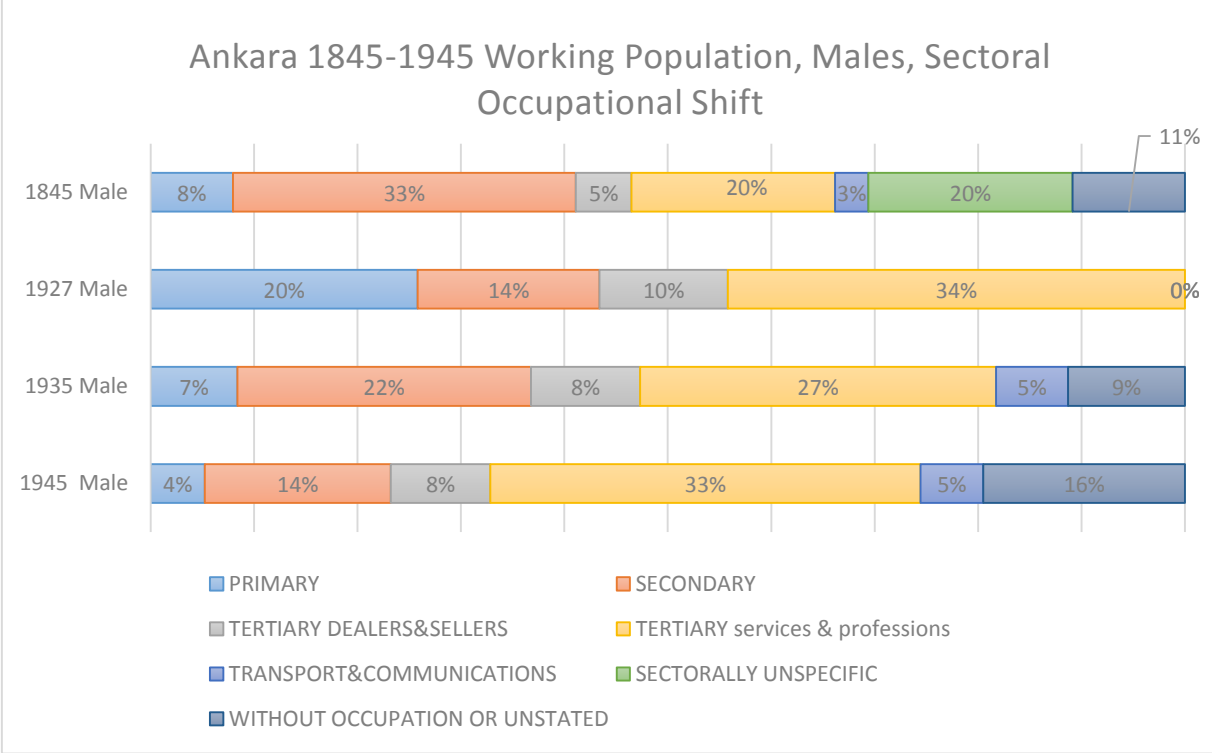


Chart 193- Ankara 1935-1945 Total Population, Both Sexes, Sectoral Occupational Shift

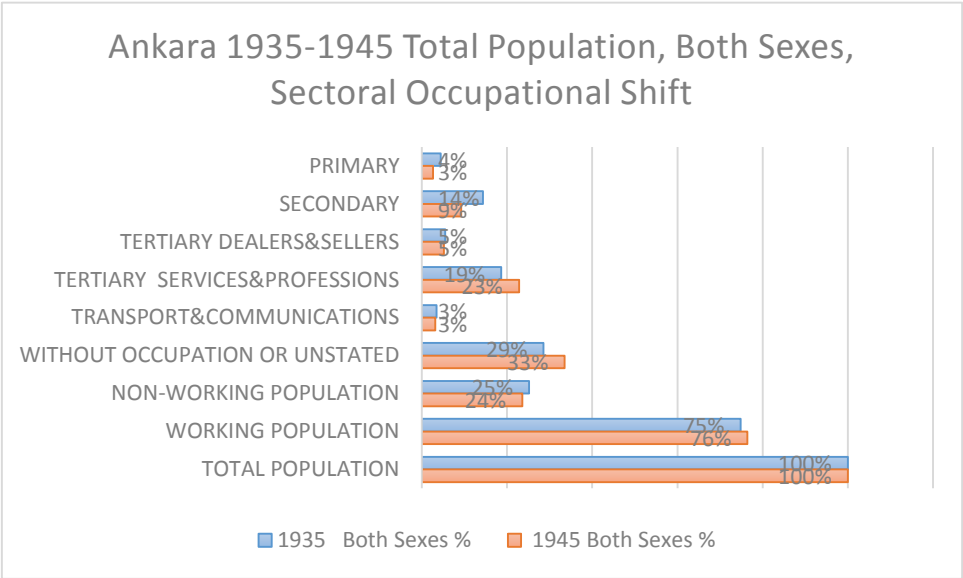


Chart 194- Ankara 1935-1945 Total Population, Both Sexes, Sectoral Occupational Shift

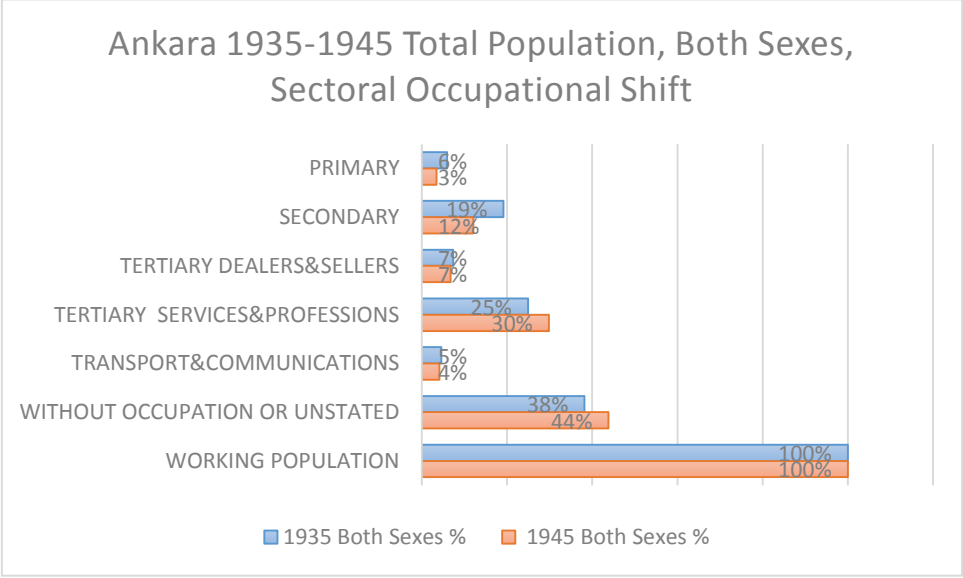


Chart 195- Ankara 1935-1945 Total Population, Males, Sectoral Occupational Shift

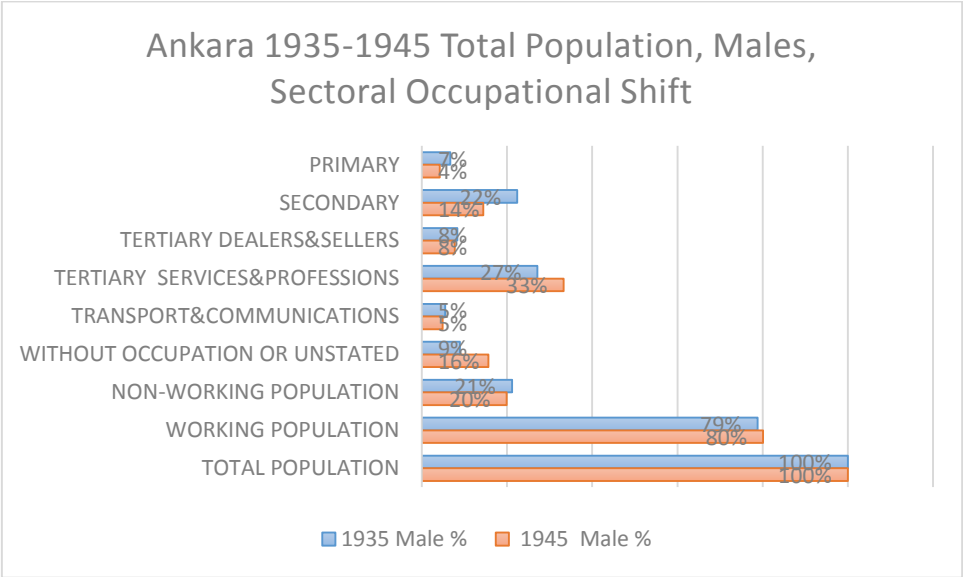


Chart 196- Ankara 1935-1945 Total Population, Males, Sectoral Occupational Shift

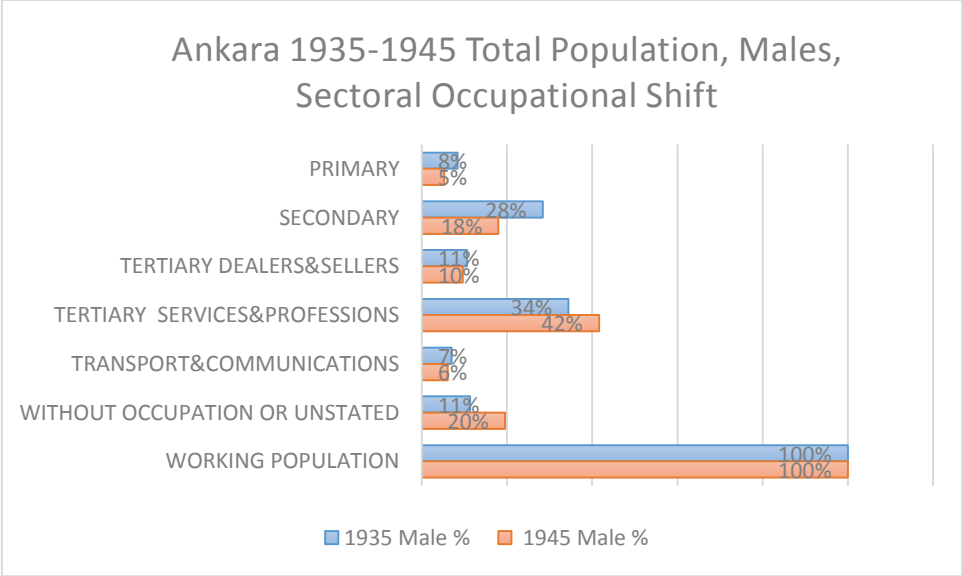


Chart 197- Ankara 1935-1945 Total Population, Females, Sectoral Occupational Shift

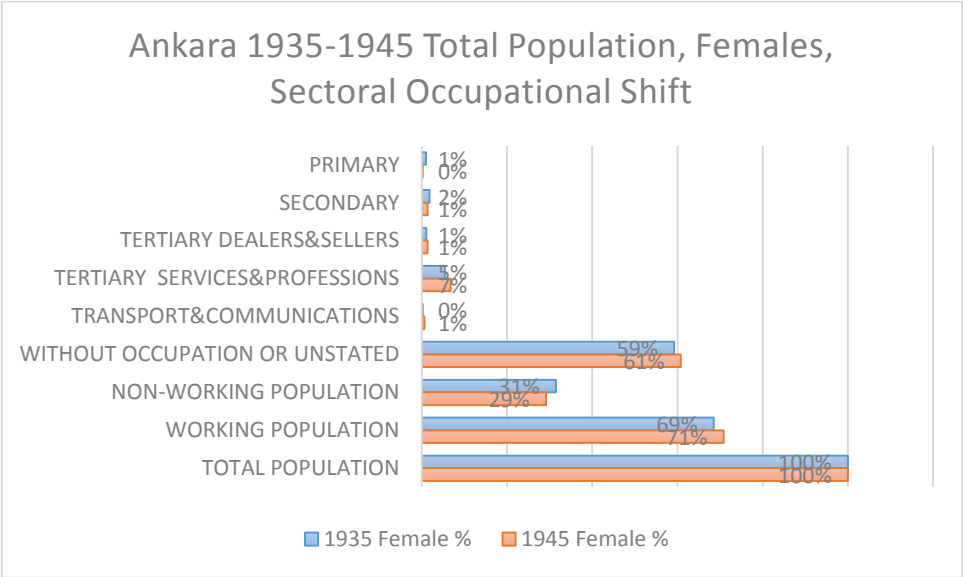
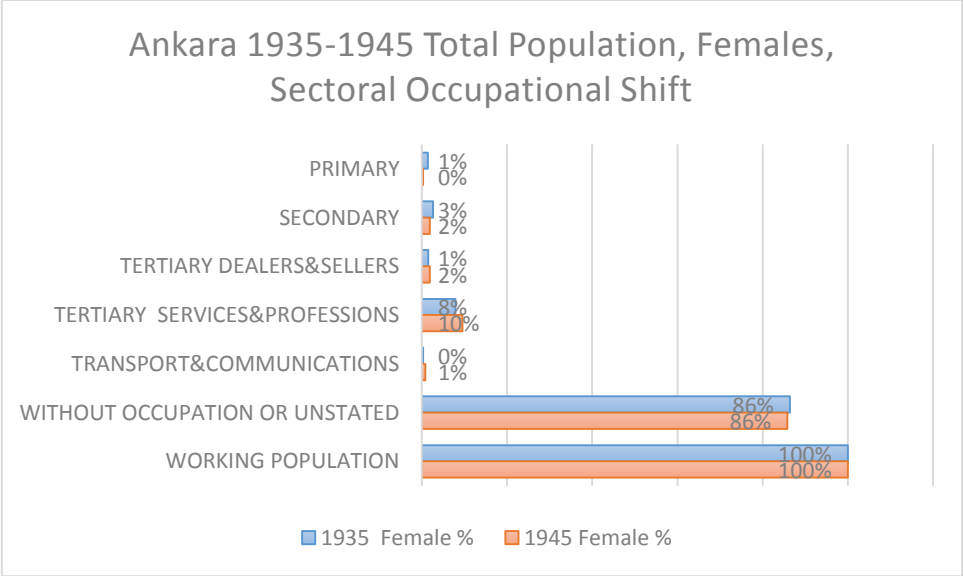


Chart 198- Ankara 1935-1945 Total Population, Females, Sectoral Occupational Shift



Summary of Charts: Ankara 1845-1945 Sectoral Occupational Allocation.

Regarding occupational transformation in Ankara from 1845 to 1945, we could observe the dominance of tertiary sector throughout this 100 year period.

Tertiary sector already has %28 of male working population in Ankara 1845 although secondary sector appears as the most dominant sector with %33 among working males.

However, when we come to 1927, we could observe the primary sector rising in shares and reach %20 among male working population from %8 while secondary sector lose some part of its share to tertiary sector, especially to tertiary services and professions.

From 1927 to 1935, primary and secondary sector further loses shares to tertiary sector, especially to tertiary services and professions regarding male working population.

From 1935 and 1945, primary sector stays under %10 while secondary sector has fallen under %15 in shares among working male population while tertiary sector increases its shares by a widening transport and communications sector.

Overall, regarding the city of Ankara from 1935 to 1945, the city has been turned from a secondary sector oriented occupational structure to tertiary sector oriented occupational structure but it appears that this process was not through secondary-tertiary transmission but through secondary-primary-tertiary pattern.

Sub-Sectoral Occupational Transformation in Ankara: 1845-1945

Secondary Sub-sectoral Occupational Allocation

Table 56- Ankara 1845 Total Population, Secondary Sub-Sectoral Occupational Allocation

1845 ANKARA (# numbers,% shares)	MALE #	MALE %
SECONDARY	1003	8%
Food industries	214	2%
Tobacco industries	73	1%
Clothing	82	1%
Footwear	199	2%
Textiles	75	1%
Industries using leather, bone etc.	110	1%
Iron and steel manufacture and products	114	1%
SECTORALLY UNSPECIFIED	329	3%
WITHOUT OCCUPATION OR UNCERTAIN	597	5%
No Stated Occupation	514	4%
Uncertain Status	83	1%
WORKING POPULATION	3029	24%
TOTAL POPULATION	12500	100%

Chart 199- Ankara 1845 Male Total Population, Secondary Sub-Sectoral Occupational Allocation

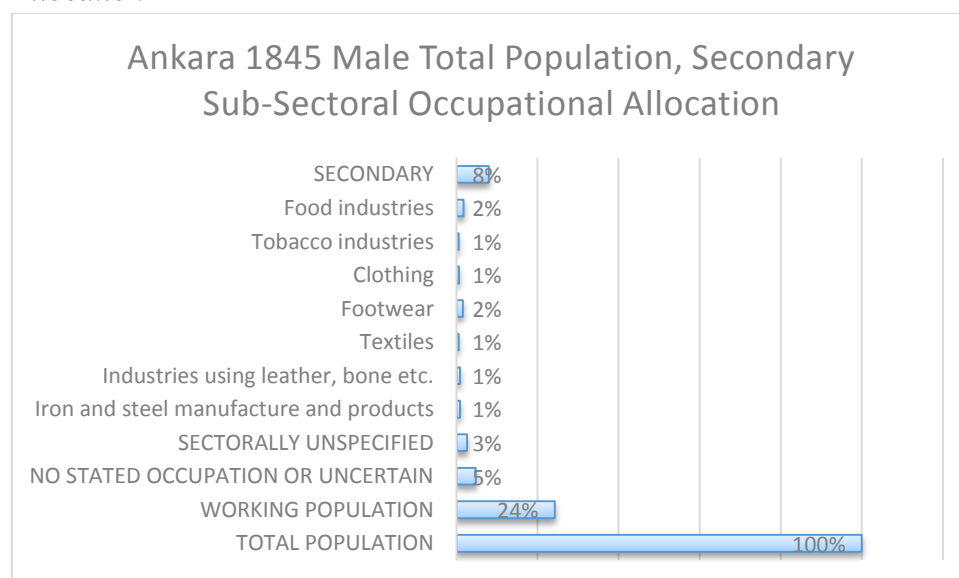
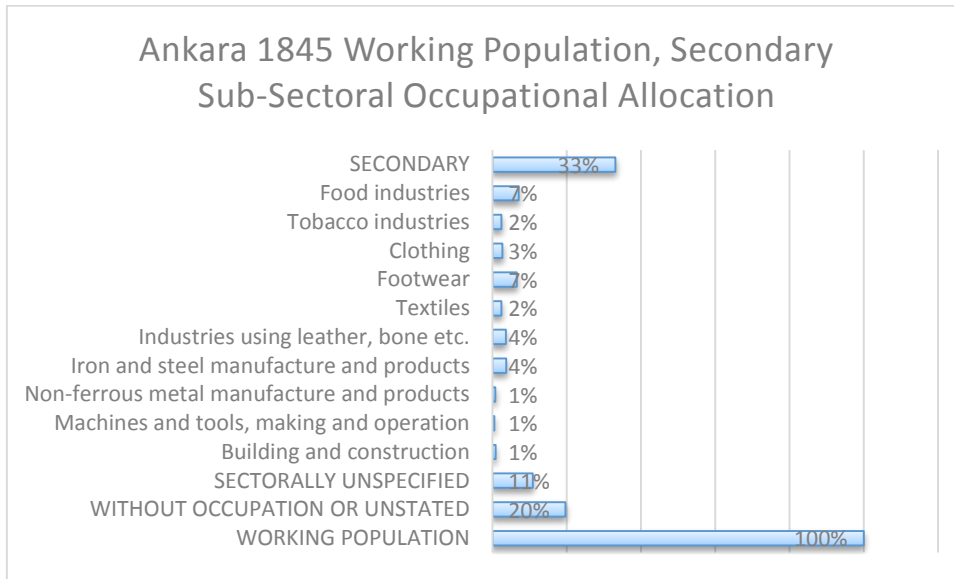


Chart 200- Ankara 1845 Working Population, Secondary Sub-Sectoral Occupational Allocation



Summary of Charts: Ankara 1845 Secondary Sub-sectoral Occupational Allocation

The results obtained from our analysis tell us that in 1845, only %8 of male total population were classified as having a secondary sector occupation. Meanwhile, %33 of all male working population has been classified under secondary sector regarding their occupations, the dispersion is quite large. None of the individual sub-sectors appear as having a large role within secondary sector while occupations are concentrated around food industries, clothing, footwear, leather-bone industries and iron-steel manufacturing and related products.

Table 57-Ankara 1935 Total Population Both Sexes Secondary Sub-Sectoral Occupational Allocation

ANKARA 1935 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH%
SECONDARY	16732	845	17577	22%	2%	14%
Mining and quarrying	48	0	48	0%	0%	0%
Clothing	1122	560	1682	1%	1%	1%
Textiles	110	39	149	0%	0%	0%
Wood Industries	1684	6	1690	2%	0%	1%
Industries using leather, bone etc.	203	0	203	0%	0%	0%
Paper industries	375	5	380	1%	0%	0%
Chemical, Soap, Adhesives, Manufactures	17	0	17	0%	0%	0%
Iron and steel manufacture and products	935	0	935	1%	0%	1%
Machines and tools, making and operation	1232	0	1232	2%	0%	1%
Stone and mineral processing industries	628	0	628	1%	0%	1%
Building and Construction	4590	0	4590	6%	0%	4%
Electricity generation and supply	95	1	96	0%	0%	0%
Factory Labourer	4675	224	4899	6%	0%	4%
Food/Drink/Tobacco industries	1018	10	1028	1%	0%	1%
WITHOUT OCCUPATION OR UNSTATED	6674	28372	35046	9%	59%	29%
NO OR UNKNOWN PROFESSION	6674	28372	35046	9%	59%	29%
WORKING POPULATION	58985	32838	91823	79%	69%	75%
NON-WORKING POPULATION	15824	15073	30897	21%	31%	25%
TOTAL POPULATION	74809	47911	122720	100%	100%	100%

Chart 201-Ankara 1935 Total Population Both Sexes Secondary Sub-Sectoral Occupational Allocation

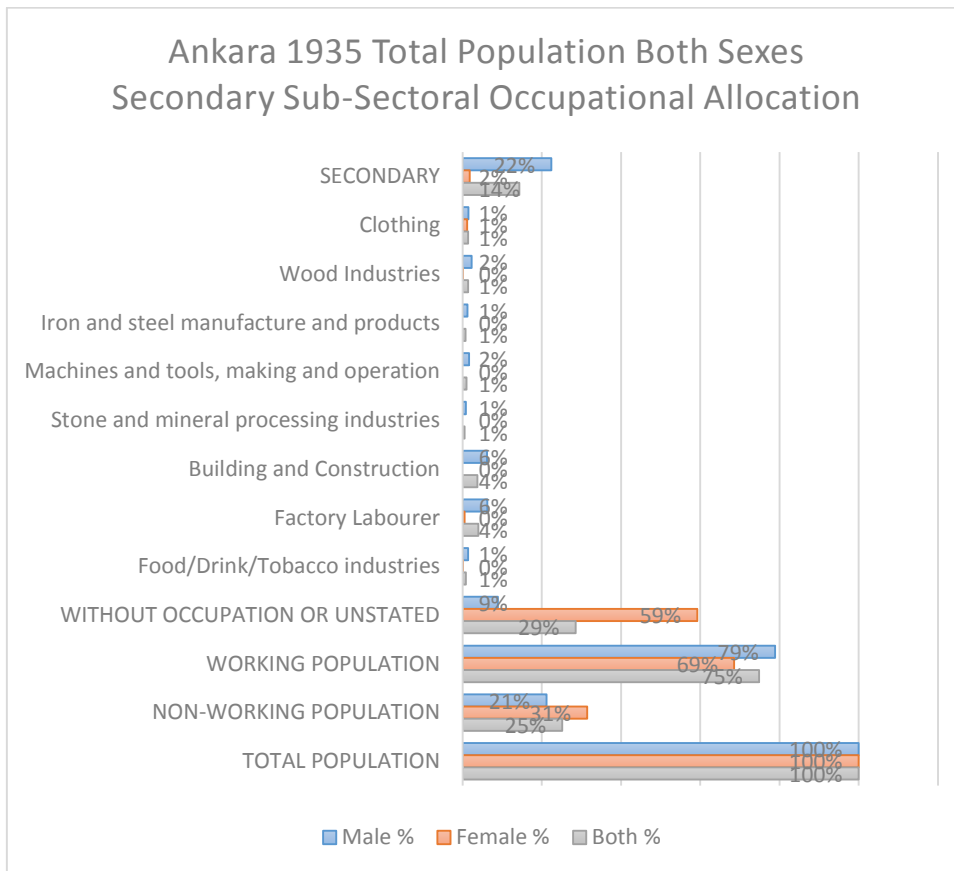


Chart 202-Ankara 1935 Working Population Both Sexes Secondary Sub-Sectoral Occupational Allocation

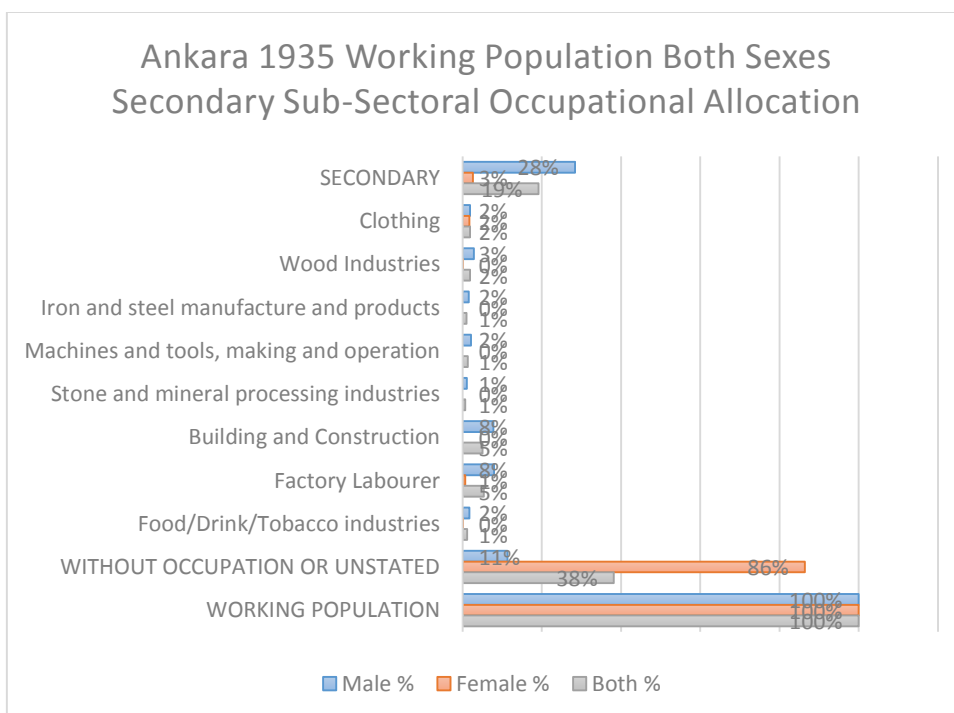
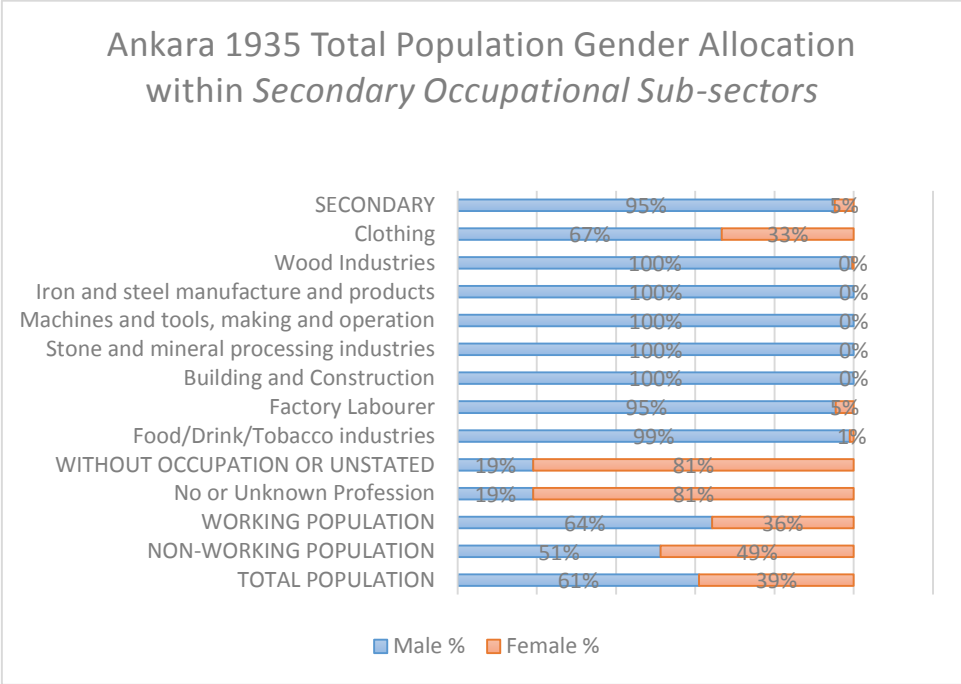


Chart 203-Ankara 1935 Total Population Gender Allocation within Secondary Occupational Sub-sectors



Summary of Charts: Ankara 1935 Secondary Sub-sectoral Allocation

Regarding 1935 Census registers, the results obtained from our analysis indicates that while %14 of total population was classified under secondary sector; not many Sub-sectoral occupations appear as a prominent occupational sub-sector. It would be more meaningful if we would focus on the male occupational allocations since among females, most of the working population were classified under the title ‘without occupation or unstated’.

Among working males, building and construction and factory laborers sub-sectors has relatively larger shares than others while %6 of working males for each are classified under this sub-sectoral title. One should also note that secondary sector activities among males are generally concentrated around more ‘heavy industry related activites, like iron-steeling manufacturing or machine making.

Gender breakdown of individual sub-sectors tells us that almost in all secondary sector sub-sectors, males are dominant to females while only in the clothing sub-sector, the presence of females are more heavily felt.

Table 58- Ankara 1945 Total Population Secondary Sub-Sectoral Occupational Allocation

ANKARA 1945 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
SECONDARY	19723	1168	20891	14%	1%	9%
Mining and quarrying	149	0	149	0%	0%	0%
Clothing	2002	695	2697	1%	1%	1%
Textiles	177	43	220	0%	0%	0%
Wood Industries	1895	16	1911	1%	0%	1%
Industries using leather, bone etc.	346	5	351	0%	0%	0%
Paper industries	725	22	747	1%	0%	0%
Chemical, Soap, Adhesives, Manufactures	31	16	47	0%	0%	0%
Iron and steel manufacture and products	1345	7	1352	1%	0%	1%
Machines and tools, making and operation	4172	80	4252	3%	0%	2%
Stone and mineral processing industries	436	2	438	0%	0%	0%
Building and Construction	5059	33	5092	4%	0%	2%
Electricity generation and supply	459	18	477	0%	0%	0%
Factory Labourer	1111	190	1301	1%	0%	1%
Food/Drink/Tobacco industries	1816	41	1857	1%	0%	1%
WITHOUT OCCUPATION OR UNSTATED	21410	54489	75899	16%	61%	33%
NO OR UNKNOWN PROFESSION	21410	54489	75899	16%	61%	33%
WORKING POPULATION	109784	63517	173301	80%	71%	76%
NON-WORKING POPULATION	27274	26137	53411	20%	29%	24%
TOTAL POPULATION	137058	89654	226712	100%	100%	100%

Chart 204- Ankara 1945 Total Population Both Sexes Secondary Sub-Sectoral Occupational Allocation

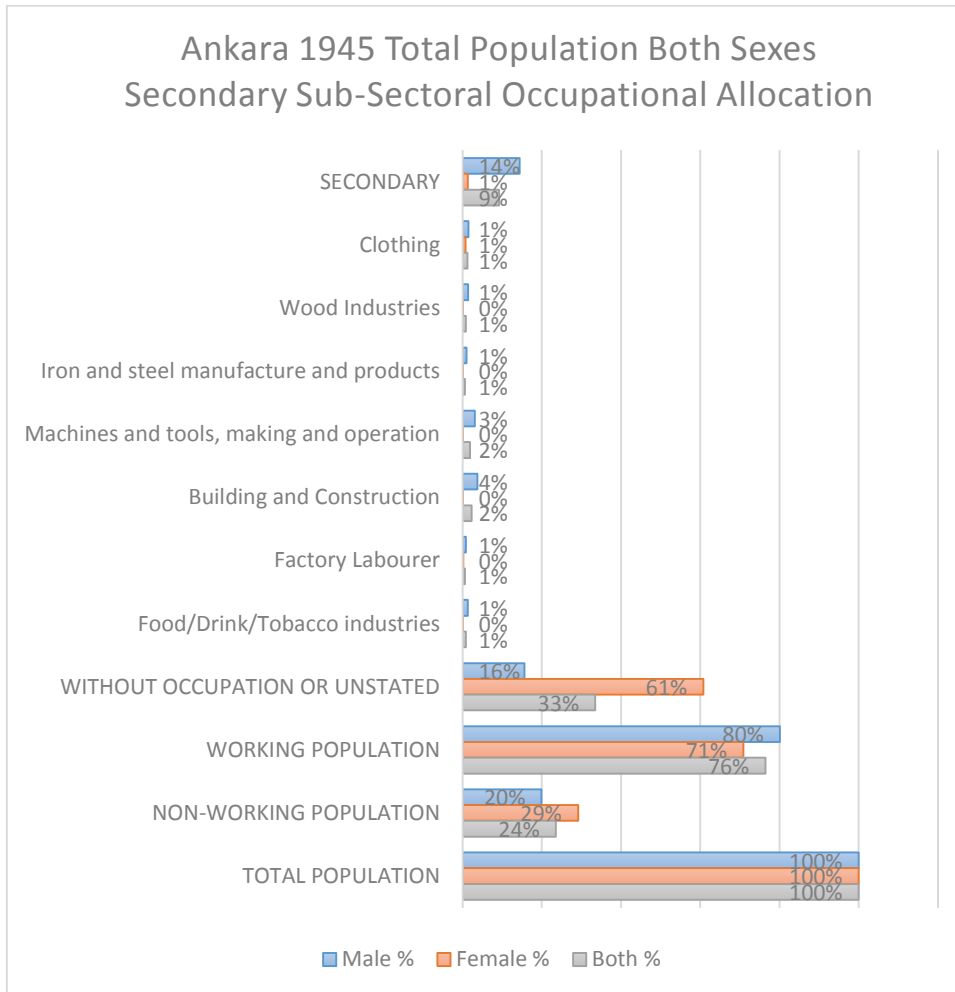


Chart 205- Ankara 1945 Working Population Both Sexes Secondary Sub-Sectoral Occupational Allocation

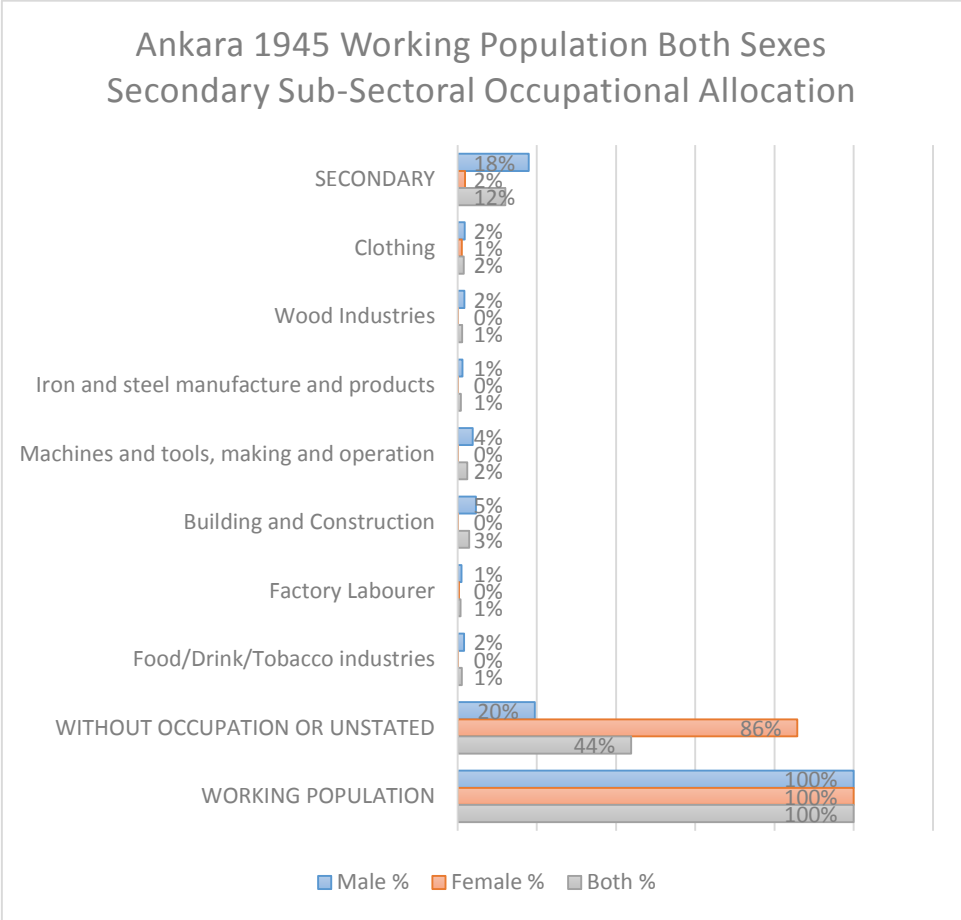
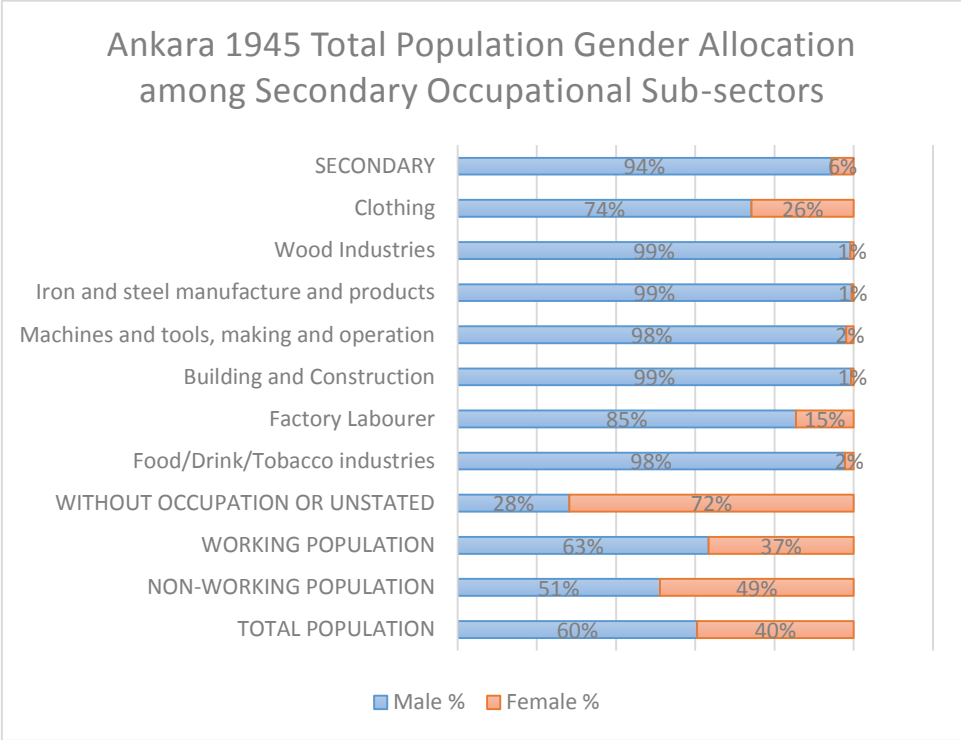


Chart 206- Ankara 1945 Total Population Gender Allocation within Secondary Occupational Sub-sectors



Summary of Charts: Ankara 1945 Secondary Sub-sectoral Allocation

Regarding 1945 secondary sub-sectoral allocations, we must first observe that only %9 of total population and %12 of working population were classified under secondary sector occupations. Among females, %86 of total population were placed under ‘without occupation or unstated’ title, therefore it would be more meaningful to work more on male occupational allocations.

Regarding male working population, secondary sector sub-sectoral allocations show us that almost %10 of all working males are classified under building and construction as well as machine making related industries and the overall share of secondary sector within all male working population is quite low (%18)

General Outlook: Ankara 1845-1945 Secondary Sub-sectoral Occupational Allocation.

Chart 207-Ankara 1845-1945 Total Population, Males, Secondary Sub-Sectoral Occupational Allocation

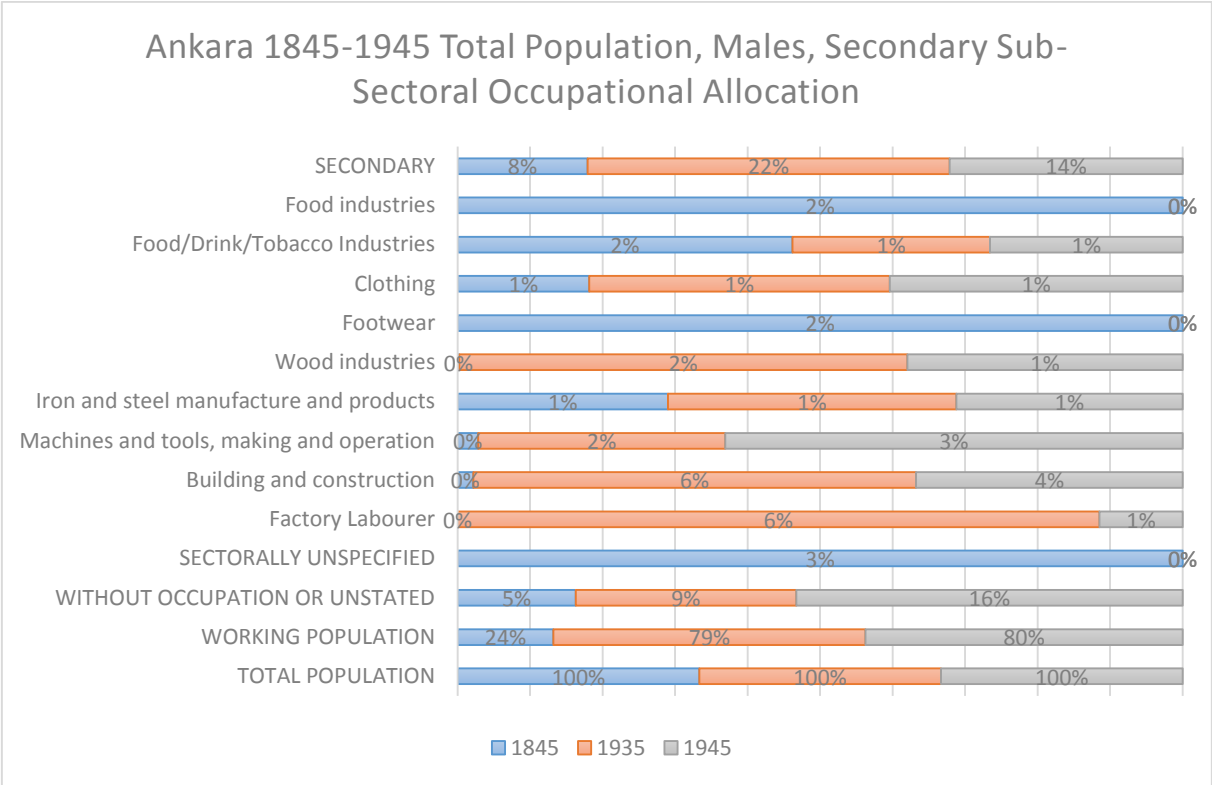


Chart 208- Ankara 1845-1945 Total Population, Males, Secondary Sub-Sectoral Occupational Allocation

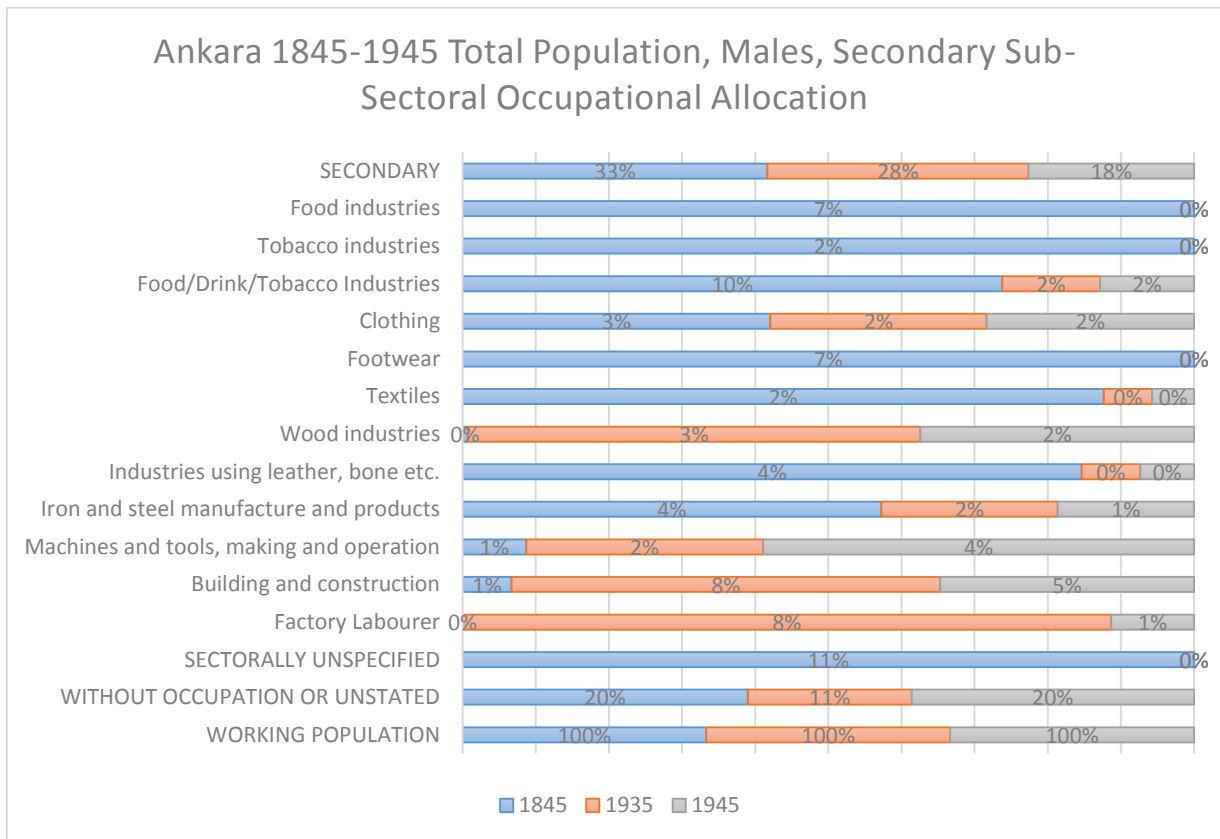


Chart 209-Ankara 1935-1945 Total Population, Both Sexes, Secondary Sub-Sectoral Occupational Shift

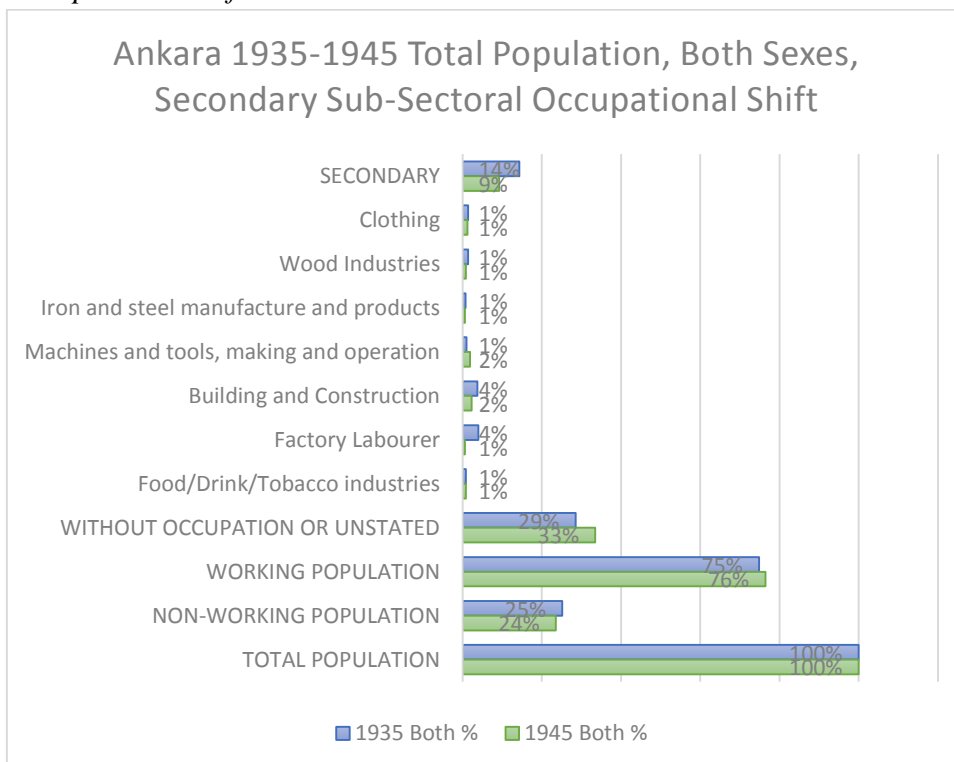


Chart 210- Ankara 1935-1945 Working Population, Both Sexes, Secondary Sub-Sectoral Occupational Shift

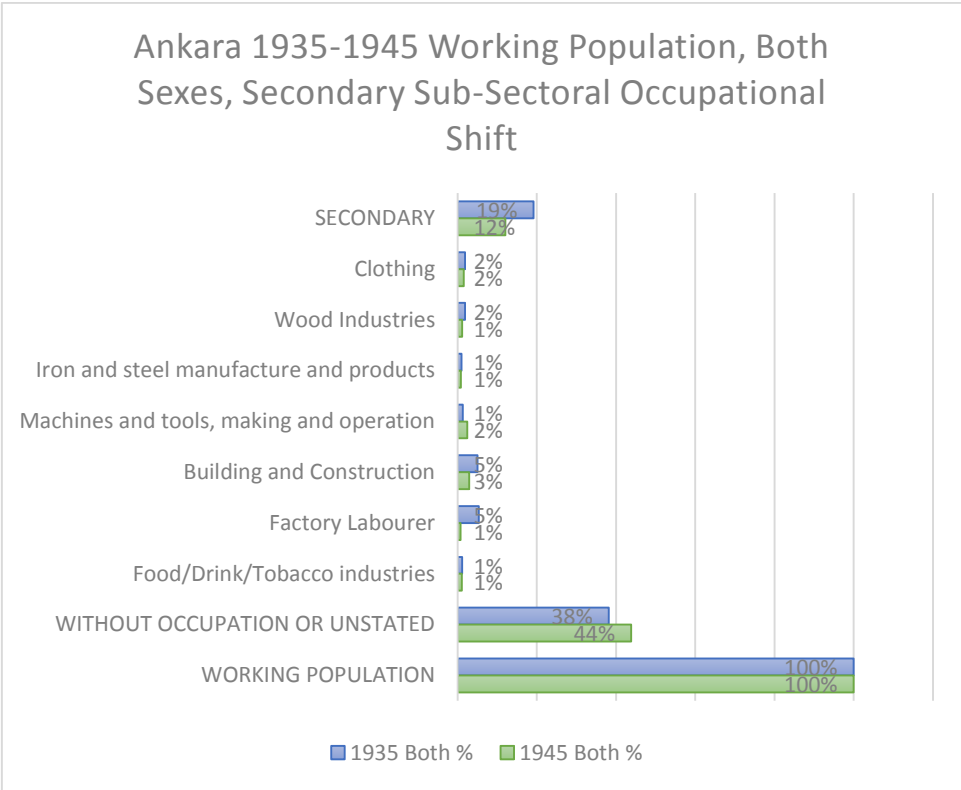


Chart 211- Ankara 1935-1945 Total Population, Males, Secondary Sub-Sectoral Occupational Shift

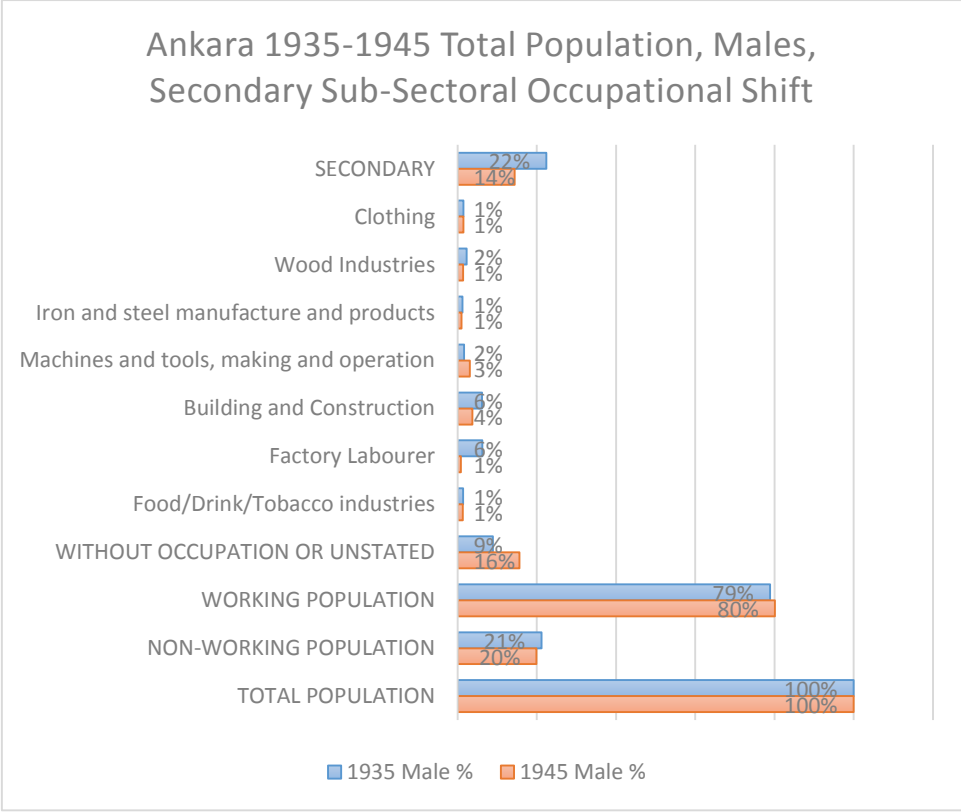


Chart 212- Ankara 1935-1945 Working Population, Males, Secondary Sub-Sectoral Occupational Shift

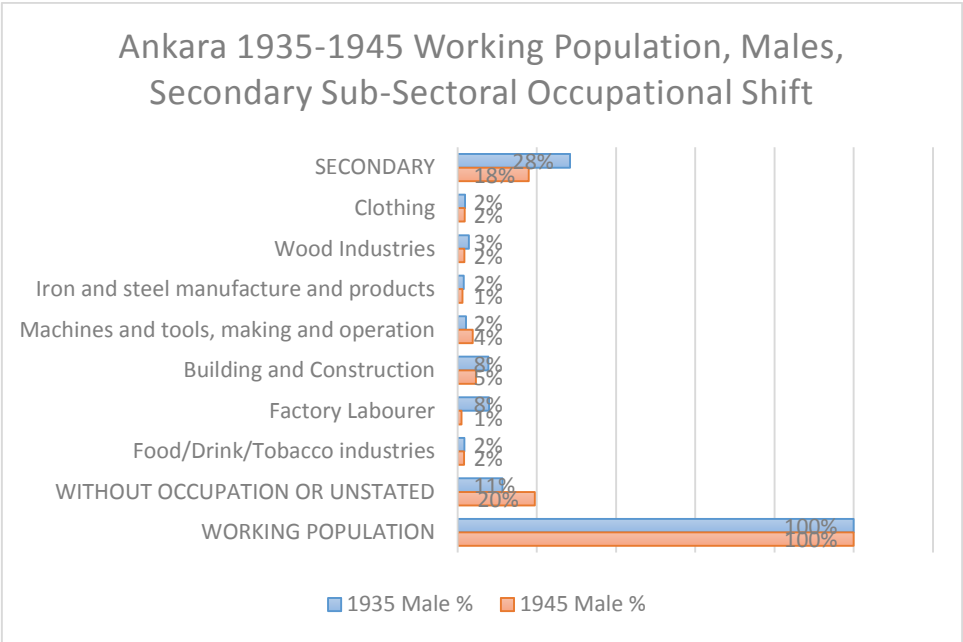


Chart 213- Ankara 1935-1945 Total Population, Females, Secondary Sub-Sectoral Occupational Shift

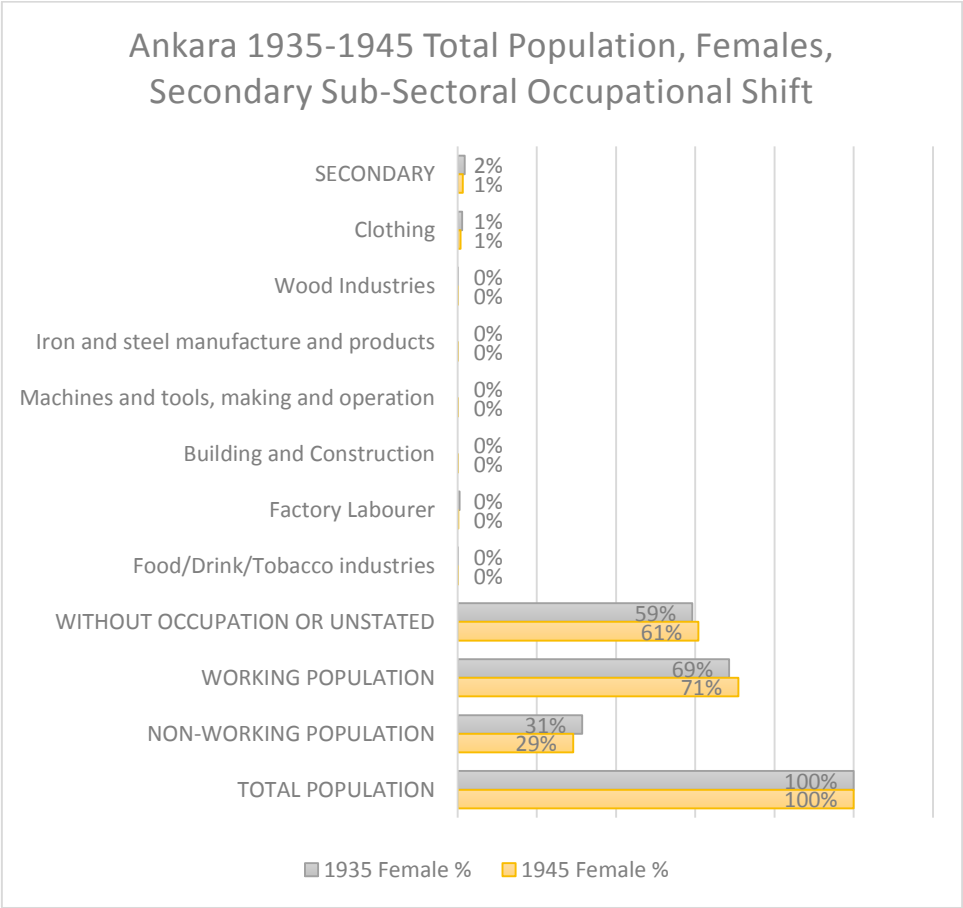
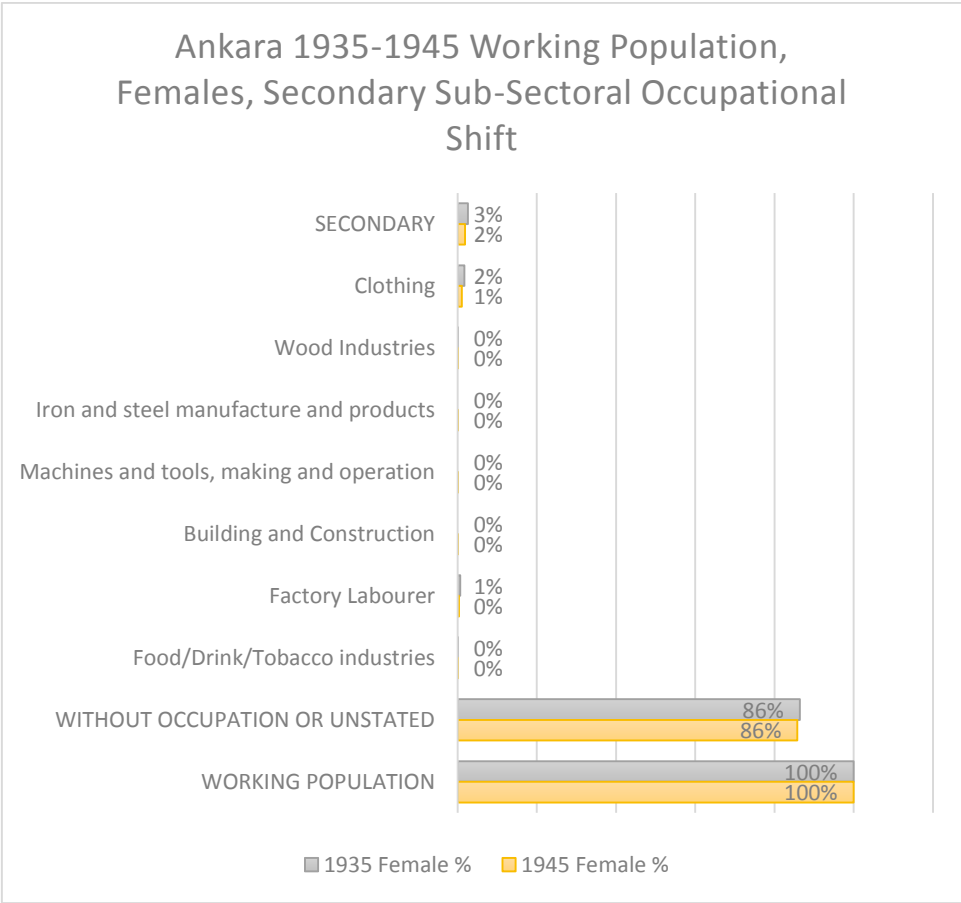


Chart 214- Ankara 1935-1945 Working Population, Females, Secondary Sub-Sectoral Occupational Shift



Summary of Charts: Ankara 1845-1945 Secondary Sub-sectoral Allocation

Regarding occupational transformation in Ankara from 1845 to 1945, the results obtained from our analysis tells us that while from 1845 to 1935³³⁰, the secondary sector gets higher shares among the total and working population, ³³¹from 1935 to 1945, it gets lower from %22 to %14 among working male population. In almost all sub-sectoral allocations, from 1935 to 1945, relevant shares are in decline.

³³⁰ For 1927 Census registers, sub-sectoral occupational data was not available.

³³¹ Females are not in this comparison since in 1845 Temettuat Registers, separate female data was not available.

Tertiary Sub-sectoral Occupational Allocation

Table 59-Ankara 1845 Total Population, Tertiary Sub-Sectoral Occupational Allocation

1845 ANKARA (# numbers,% shares)	MALE #	MALE %
TERTIARY	859	7%
TERTIARY DEALERS	89	1%
Other Tertiary Dealers	12	0%
Dealers in food	3	0%
Dealers in live animals	16	0%
Dealers in clothing and clothing accessories	23	0%
Dealers in textiles and products	21	0%
Fuel dealers	12	0%
Dealers in iron and steel, and iron and steel products	2	0%
TERTIARY SELLERS	77	1%
Dealers in food	0	0%
Sellers of food	38	0%
Sellers of clothing and clothing accessories	4	0%
Sellers of printed products		0%
Small traders	34	0%
TERTIARY SERVICES AND LIBERAL PROFESSIONS	595	5%
Food, drink and accommodation services	84	1%
Entertainment	4	0%
Miscellaneous service industries	154	1%
Domestic service	55	0%
Financial services and professions	0	0%
Commercial and administrative services	32	0%
Professions	171	1%
Professional support	23	0%
Local government service	32	0%
National government service	4	0%
Armed forces	35	0%
Owners, possessors of capital	1	0%
TRANSPORT AND COMMUNICATION	98	1%
Other Transport and Communication	59	0%
Road transport (animal power)	33	0%
Sea transport	5	0%
Communications	1	0%
SECTORALLY UNSPECIFIED	329	3%
WITHOUT OCCUPATION OR UNCERTAIN	597	5%
NO STATED OCCUPATION	514	4%
UNCERTAIN STATUS	83	1%
WORKING POPULATION	3029	24%
TOTAL POPULATION	12500	100%

Chart 215- Ankara 1845 Total Population, Tertiary Sectoral Occupational Allocation

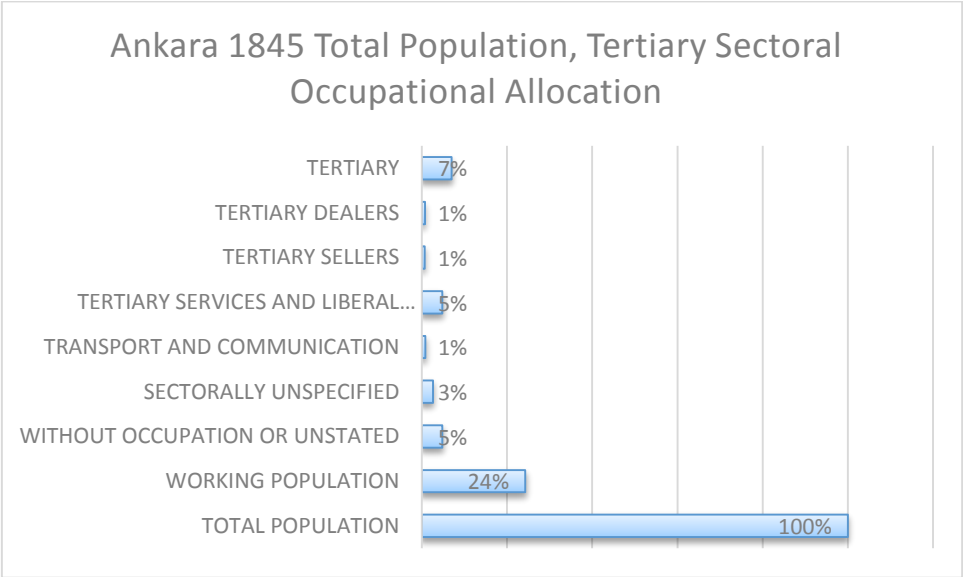


Table 60-Ankara 1845 Total Population, Tertiary Sub-Sectoral Occupational Allocation

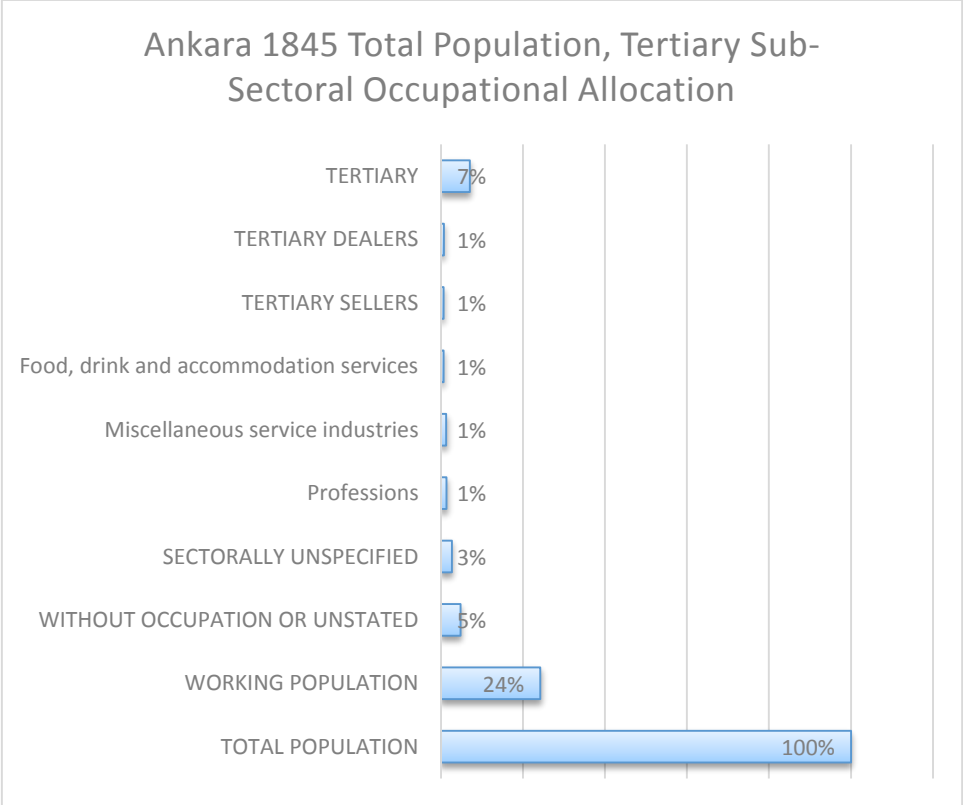


Chart 216- Ankara 1845 Working Population, Tertiary Sectoral Occupational Allocation

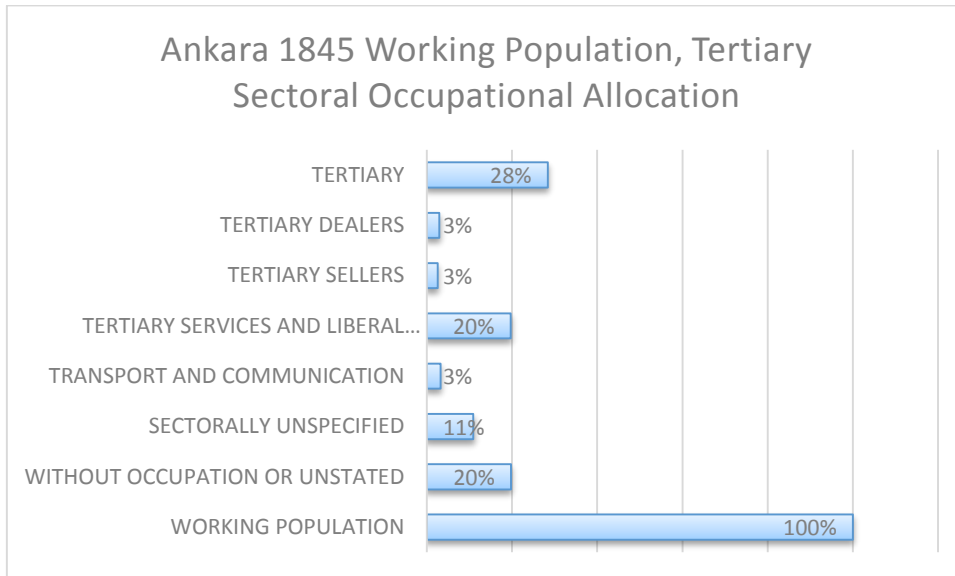
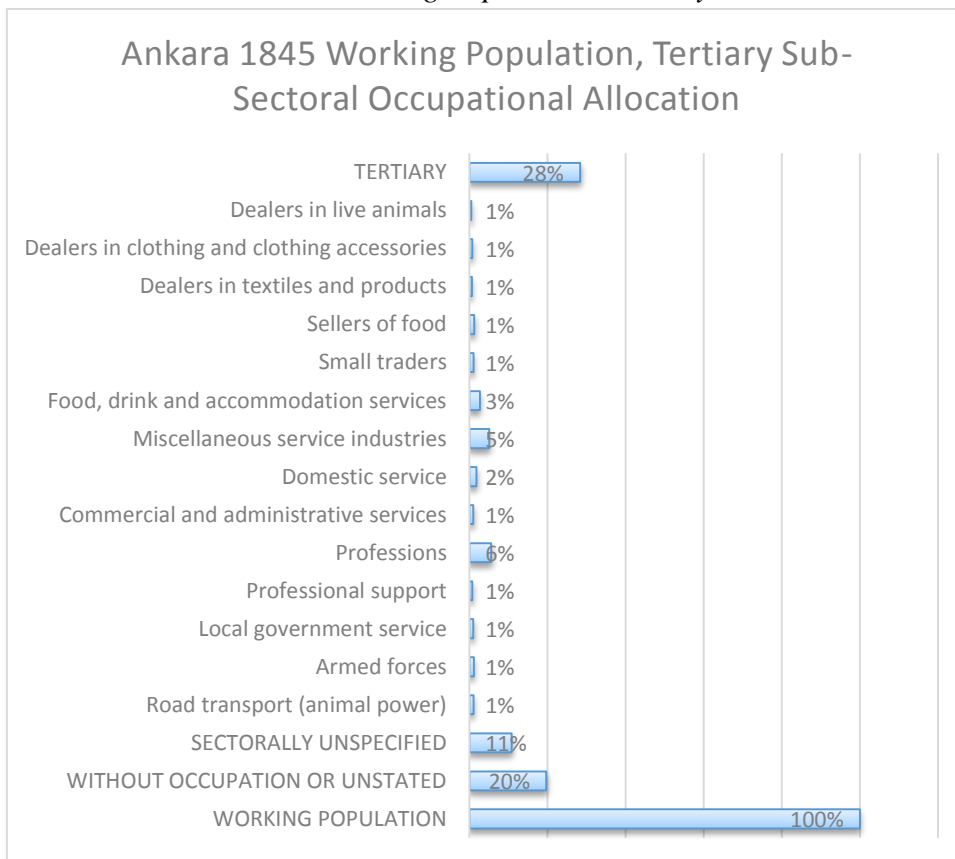


Chart 217- Ankara 1845 Working Population, Tertiary Sub-Sectoral Occupational Allocation



Summary of Charts: Ankara 1845 Tertiary Sub-sectoral Allocation

Regarding 1845 Tax Registers, tertiary sector has %28 of working population and %7 of total population. Among tertiary sector branches, tertiary services and liberal professions has the main prominence by having %20 of working population.

Regarding tertiary sector bus-sectoral allocation, the most prominent ones are professions
Overall, one must note that despite tertiary sector has almost one third of working population, there is no sub-sector that has a special concentration and the dispersion is quite wide.

Table 61-Ankara 1935 Working Population Tertiary Sub-sectoral Occupational Allocation

ANKARA 1935 (# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
TERTIARY	30621	3164	33785	41%	7%	28%
TERTIARY DEALERS&SELLERS	6230	477	6707	8%	1%	5%
Commerce	6230	477	6707	8%	1%	5%
TERTIARY services & professions	20290	2588	22878	27%	5%	19%
Private Services	1181	1314	2495	2%	3%	2%
Administrative and Public Services, Liberal Professions	19109	1274	20383	26%	3%	17%
TRANSPORT&COMMUNICATIONS	4101	99	4200	5%	0%	3%
Communication and Transport	4101	99	4200	5%	0%	3%
WITHOUT OCCUPATION OR UNSTATED	6674	28372	35046	9%	59%	29%
NO OR UNKNOWN PROFESSION	6674	28372	35046	9%	59%	29%
WORKING POPULATION	58985	32838	91823	79%	69%	75%
NON-WORKING POPULATION	15824	15073	30897	21%	31%	25%
TOTAL POPULATION	74809	47911	122720	100%	100%	100%

Chart 218- Ankara 1935 Total Population, Tertiary Sectoral Occupational Allocation

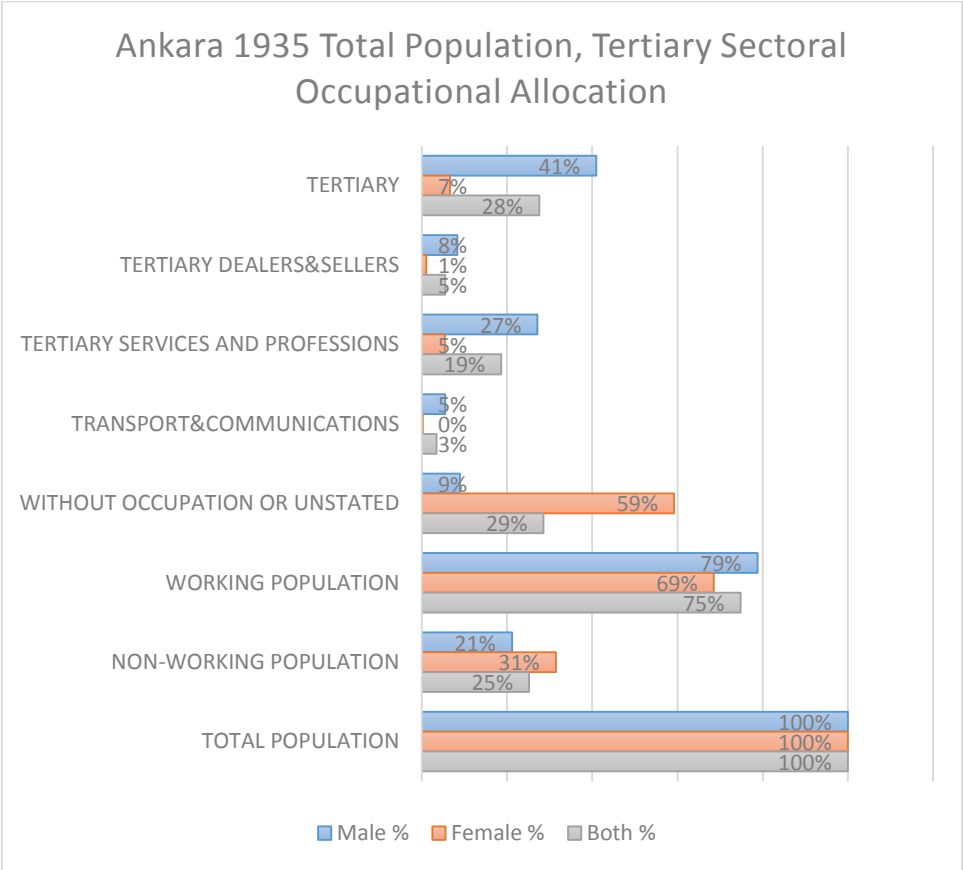


Chart 219- Ankara 1935 Working Population, Tertiary Sectoral Occupational Allocation

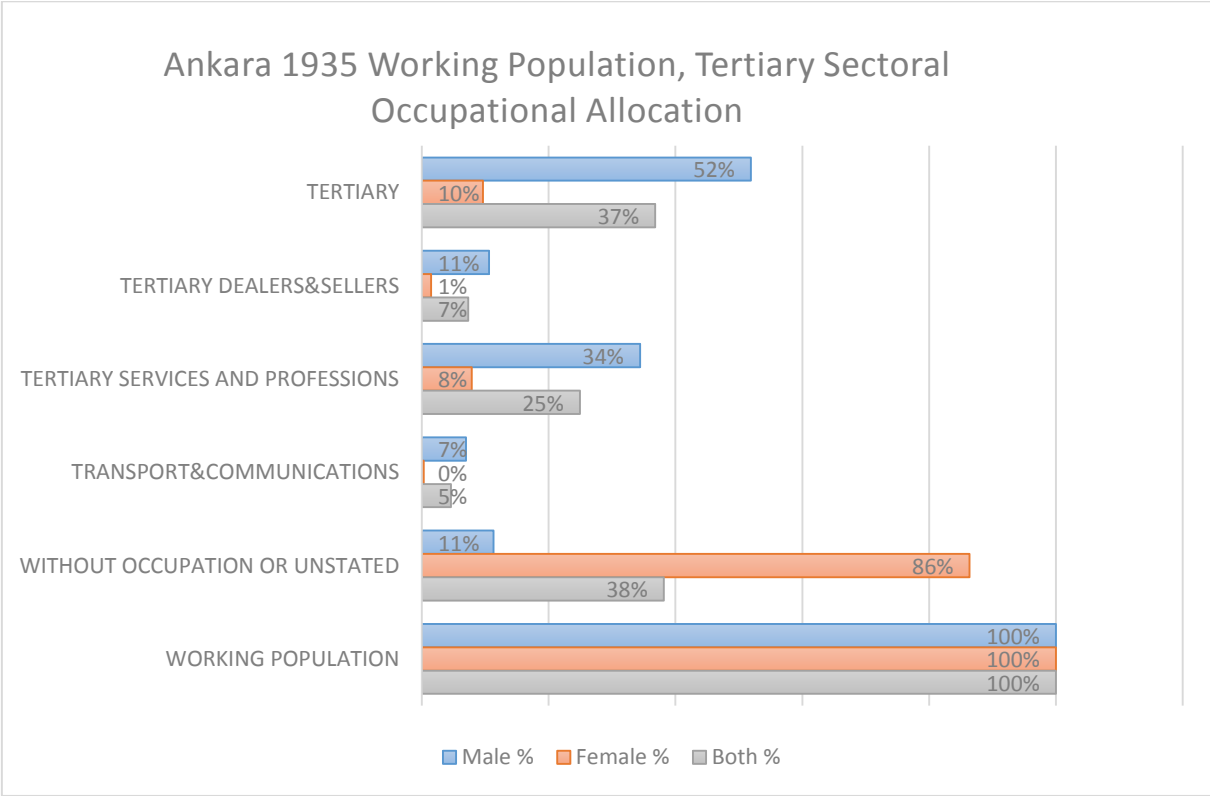


Chart 220- Ankara 1935 Total Population, Tertiary Sub-Sectoral Occupational Allocation

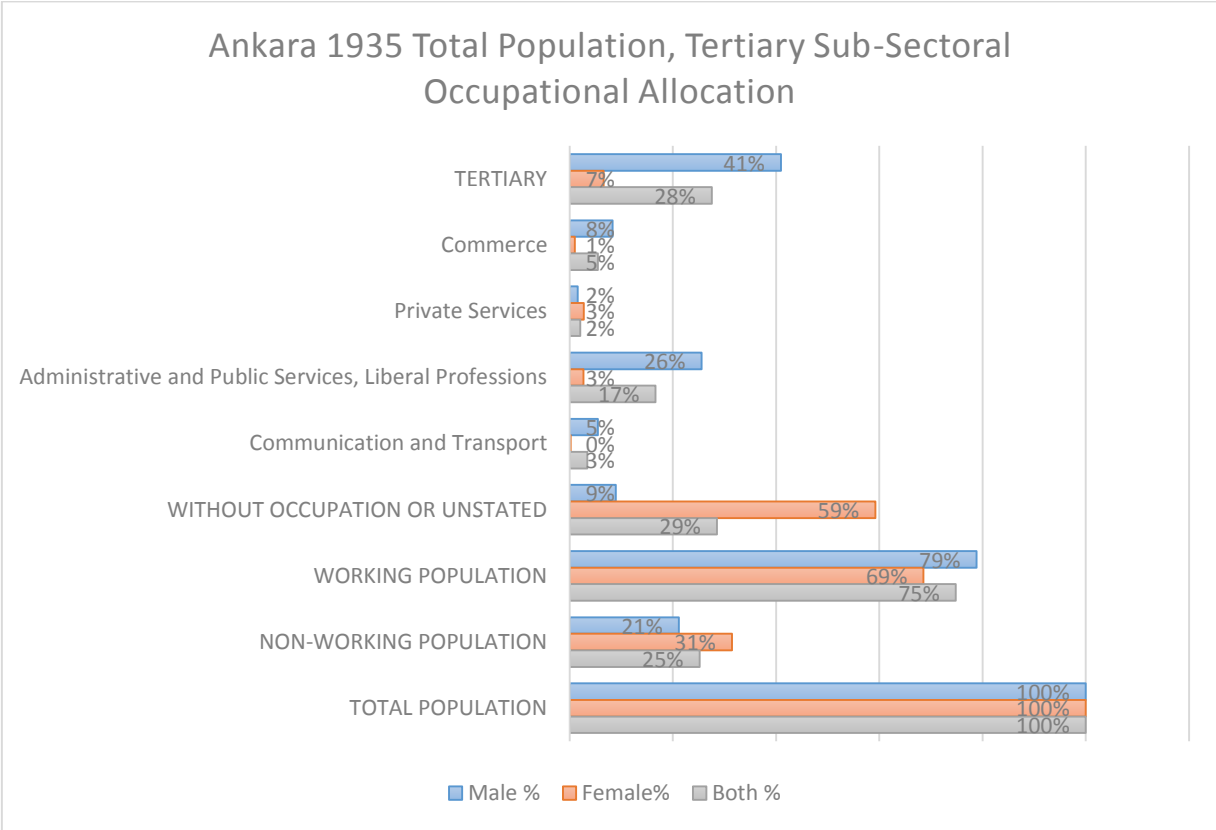
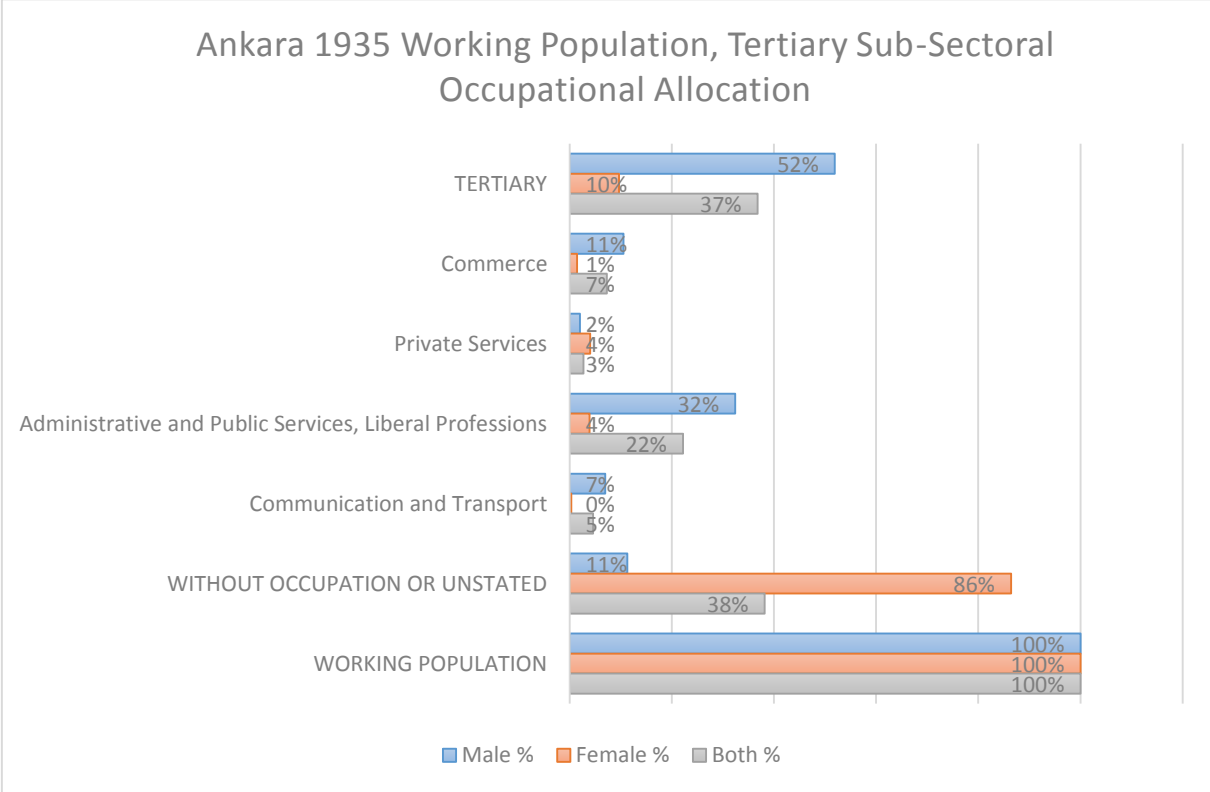


Chart 221- Ankara 1935 Working Population, Tertiary Sub-Sectoral Occupational Allocation



Summary of Charts: Ankara 1935 Tertiary Sub-sectoral Allocation

Coming to 1935, the occupational structure of the city Ankara has become tertiary sector oriented where nearly %28 of total population as well as %37 of working population were classified under tertiary sector. Among tertiary sector branches, the most prominent one appears as tertiary services and professions where %25 of working population were classified under this particular branch.

Regarding females, the rate of 'without occupation or unstated' among males is %59 and it would not be so meaningful to explore into the female-specific occupational structure. Nevertheless, from the one who were actually in working population, %10 of them were in tertiary sector and %8 of them were classified under tertiary services and professions. In general terms, among the working female population who belong to tertiary sector by occupation, the majority appears to be a part of either administrative services or private services; the divide is almost even.

Regarding males, the majority of the person who belong to tertiary sector and tertiary services and professions by branch, are in fact, classified under administrative services title. This is another way to say that government services and related white collar occupations were common among males and almost %32 of working males were classified under administrative and public services or liberal professions title.

Table 62- Ankara 1945 Total Population, Tertiary Sub-Sectoral Occupational Allocation

ANKARA 1945(# numbers,% shares)	MALE #	FEMALE #	BOTH #	MALE %	FEMALE %	BOTH %
TERTIARY	62885	7699	70584	46%	9%	31%
TERTIARY DEALERS&SELLERS	10569	1157	11726	8%	1%	5%
COMMERCE	10569	1157	11726	8%	1%	5%
TERTIARY SERVICES & PROFESSIONS	45650	6052	51702	33%	7%	23%
PRIVATE SERVICES	687	1283	1970	1%	1%	1%
ADMINISTRATIVE AND PUBLIC SERVICES, LIBERAL PROFESSIONS	44963	4769	49732	33%	5%	22%
TRANSPORT&COMMUNICATIONS	6666	490	7156	5%	1%	3%
COMMUNICATION AND TRANSPORT	6666	490	7156	5%	1%	3%
WITHOUT OCCUPATION OR UNSTATED	21410	54489	75899	16%	61%	33%
NO OR UNKNOWN PROFESSION	21410	54489	75899	16%	61%	33%
WORKING POPULATION	109784	63517	173301	80%	71%	76%
NON-WORKING POPULATION	27274	26137	53411	20%	29%	24%
TOTAL POPULATION	137058	89654	226712	100%	100%	100%

Chart 222- Ankara 1945 Total Population, Tertiary Sectoral Occupational Allocation

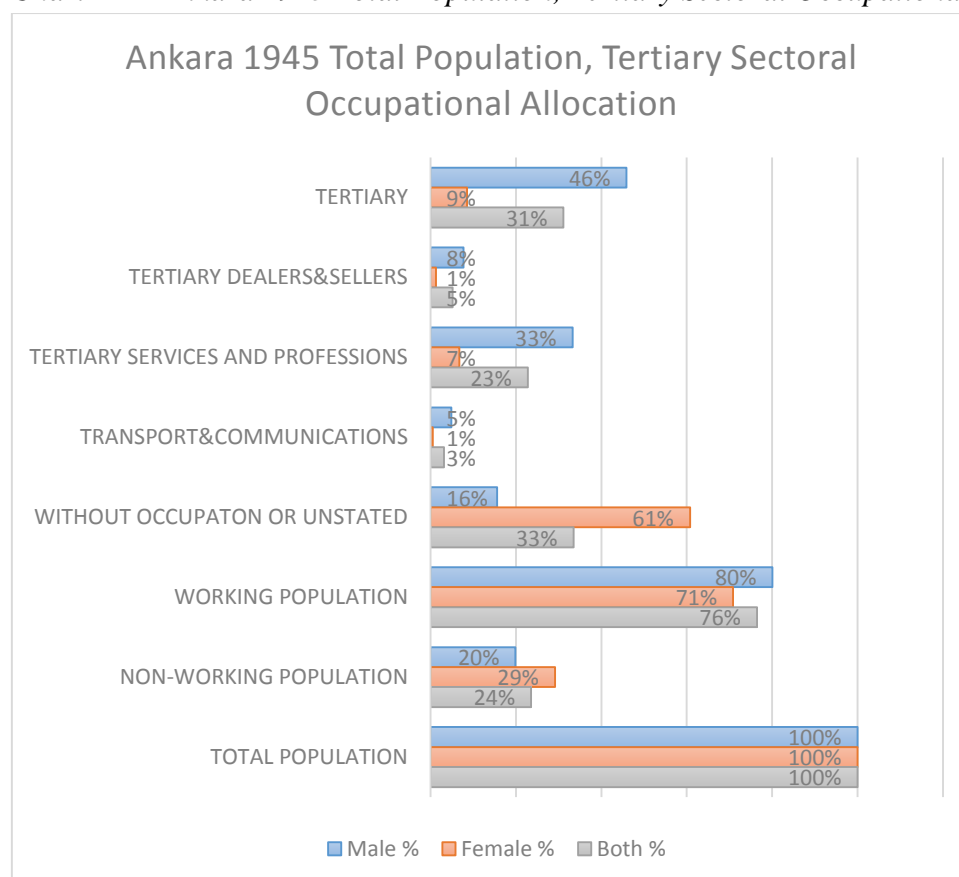


Chart 223- Ankara 1945 Total Population, Tertiary Sub-Sectoral Occupational Allocation

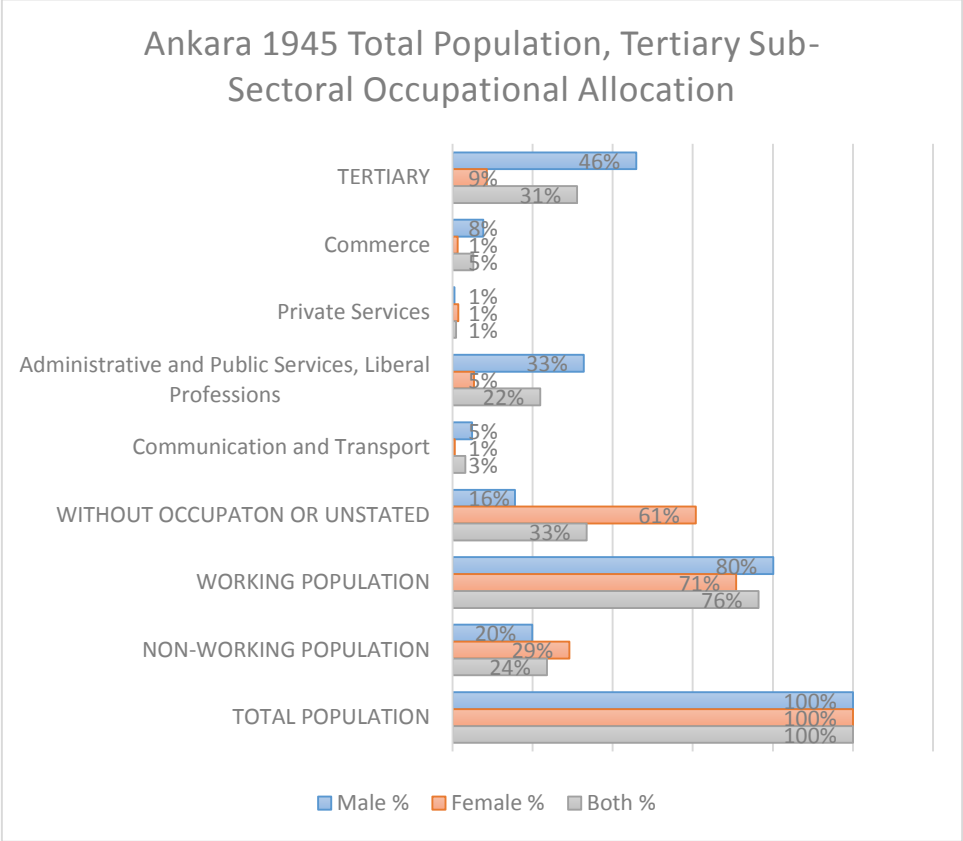


Chart 224- Ankara 1945 Working Population, Tertiary Sectoral Occupational Allocation

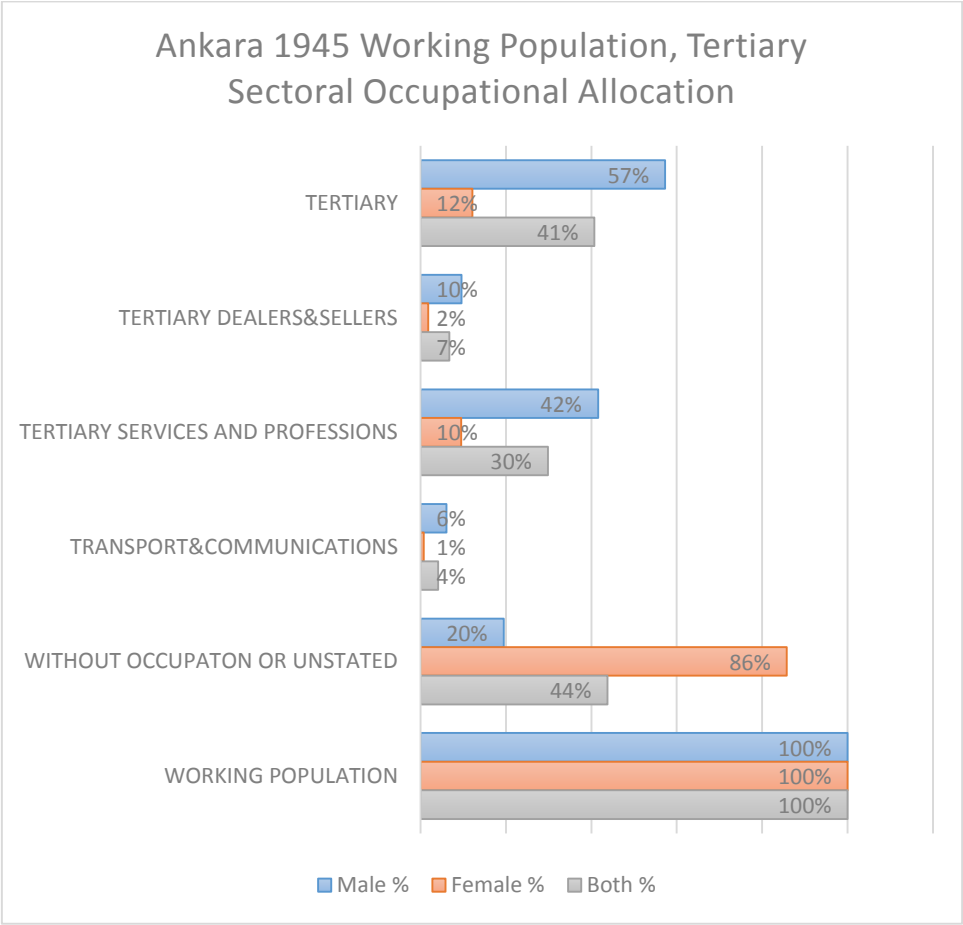


Chart 225- Ankara 1945 Working Population, Tertiary Sub-Sectoral Occupational Allocation

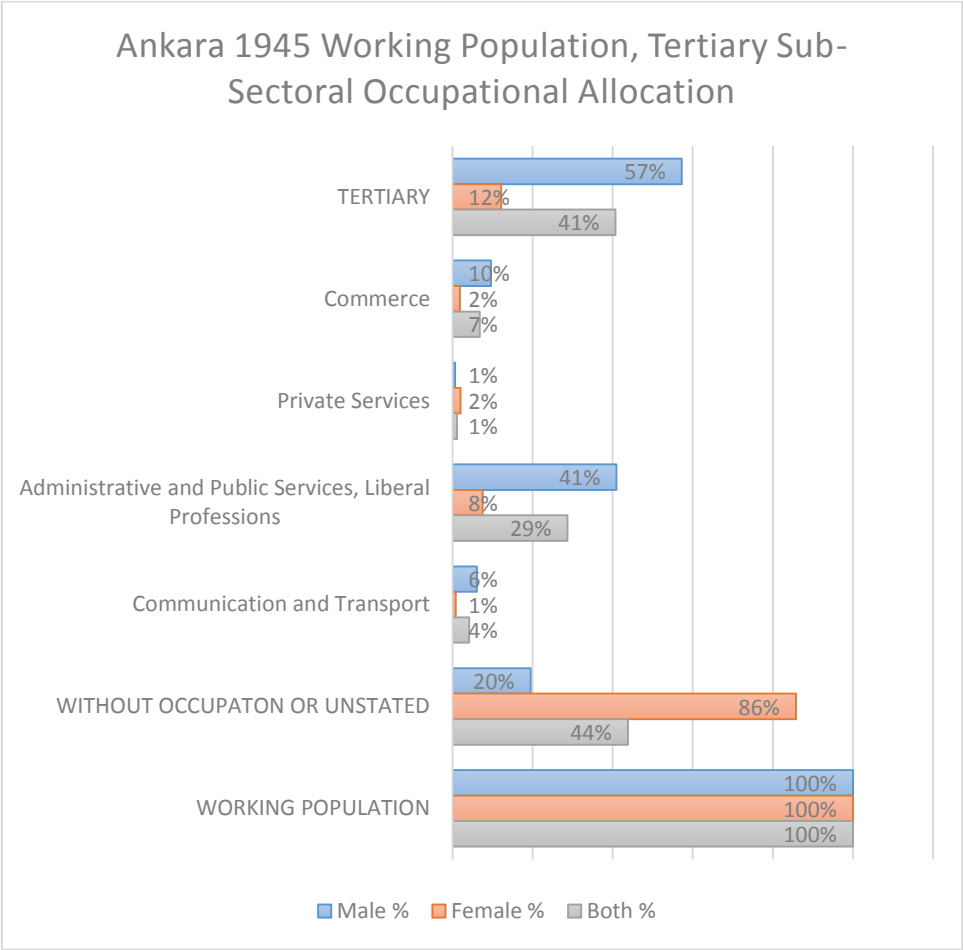


Chart 226-Ankara 1945 Gender Allocation within Tertiary Occupational Sectors

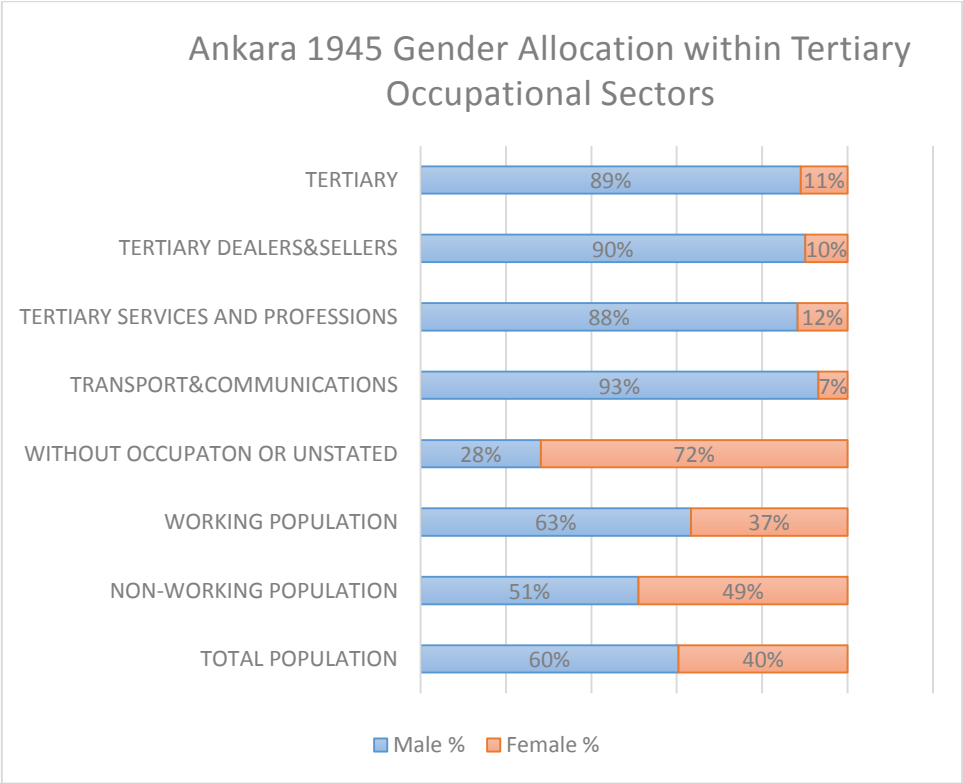
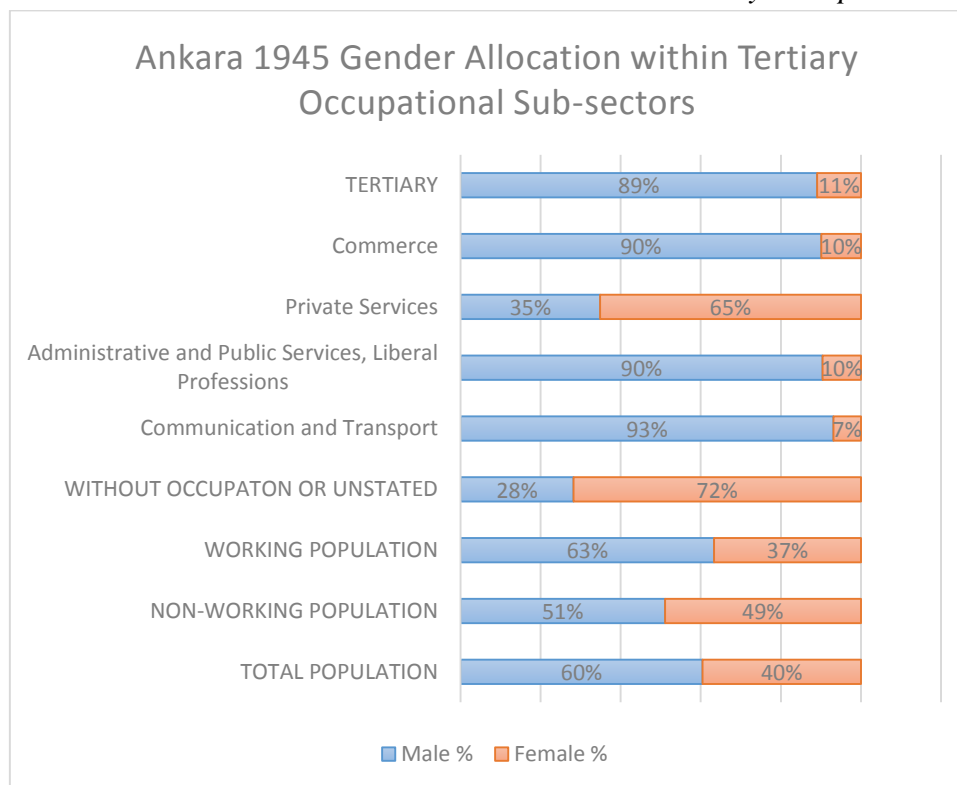


Chart 227-Ankara 1945 Gender Allocation within Tertiary Occupational Sub-sectors



Summary of Charts: Ankara 1945 Tertiary Sub-sectoral Allocation

When we come to 1945, the results obtained from our analysis tell us that %31 of total population became a part of tertiary sector by occupation. Among them, tertiary services and professions lead the way by having %23 of total population meanwhile, ‘administrative and public services or liberal professions’ title has %22 of total population and appear as the most prominent tertiary sub-sectoral occupation.

Among females, %12 of working population were a part of tertiary sector by occupation meanwhile, %8 of female working population were classified under administrative and public services and liberal professions.

Among males, %42 of all working population were classified under tertiary services and professions while administrative services and public occupations lead among other tertiary sub-sectoral occupations, commerce (%10) as well as transport and communication (%6) also appear as prominent tertiary sector sub-sectoral occupations.

General Outlook: Ankara 1845-1945 Tertiary Sub-sectoral Occupational Shift

Chart 228-Ankara 1845-1945 Total Population Tertiary Sub-sectoral Occupational Shift

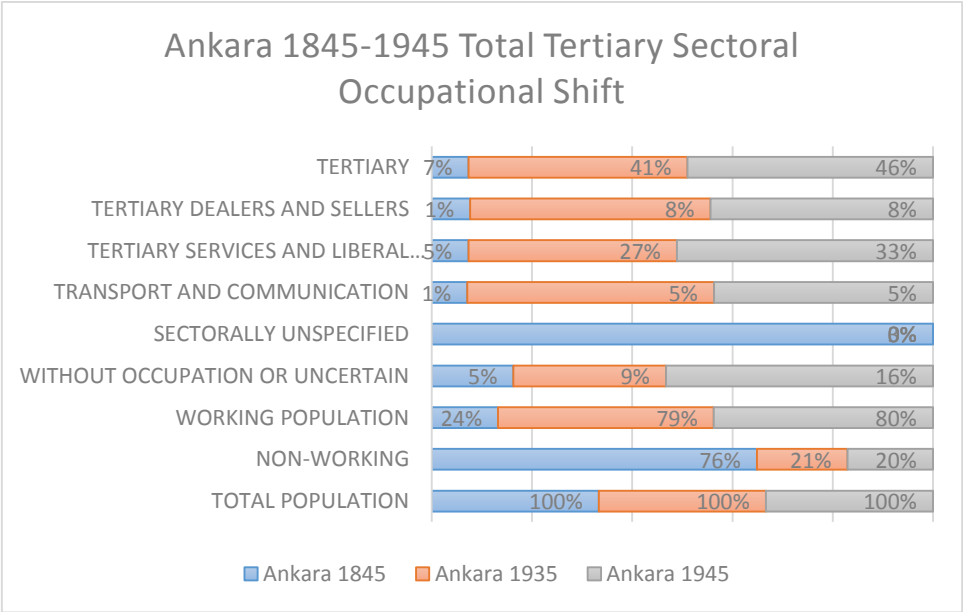


Chart 229- Ankara 1845-1945 Total Population Tertiary Sub-sectoral Occupational Shift

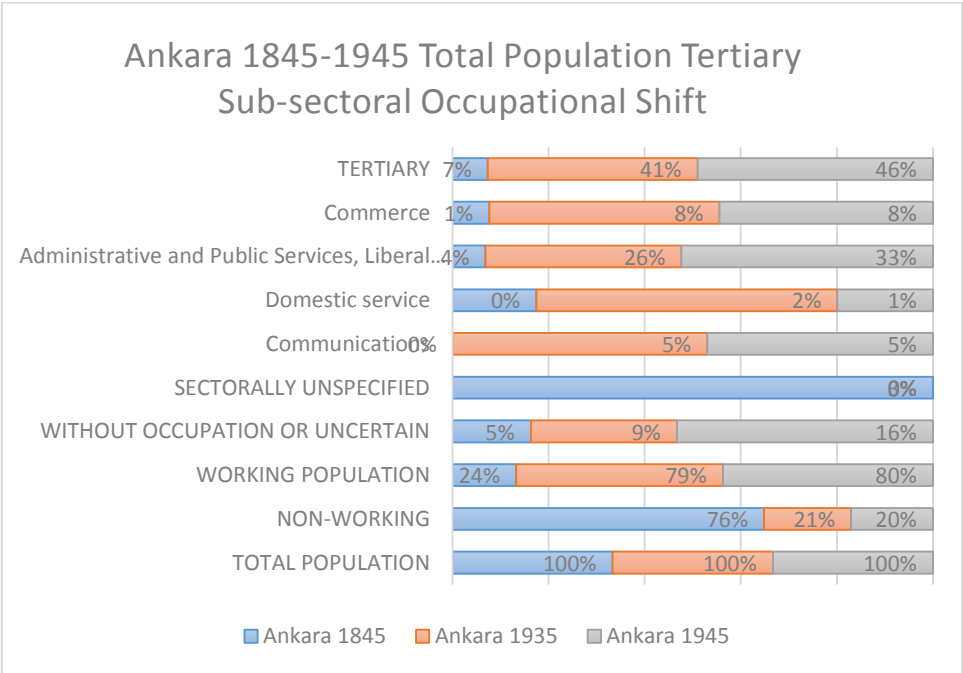


Chart 230- Ankara 1845-1945 Working Population Tertiary Sectoral Occupational Shift

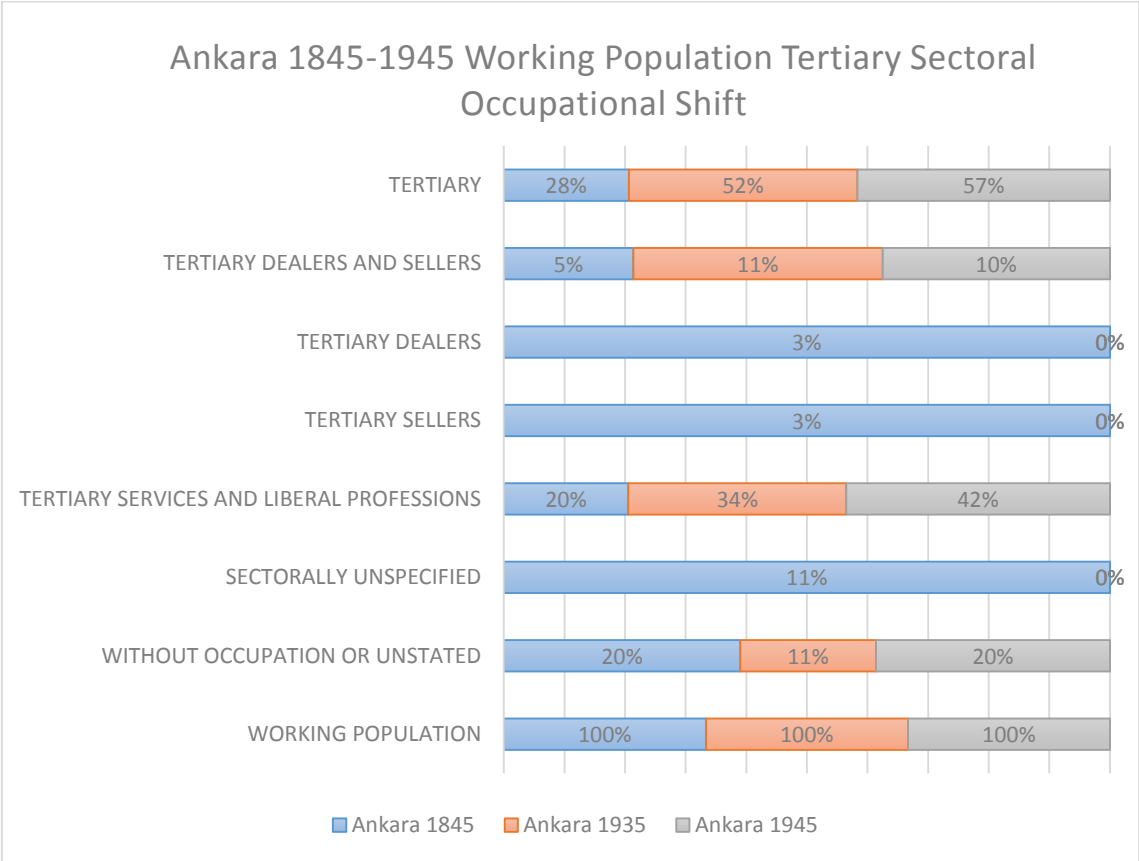


Chart 231- Ankara 1845-1945 Working Population Tertiary Sub-Sectoral Occupational Shift

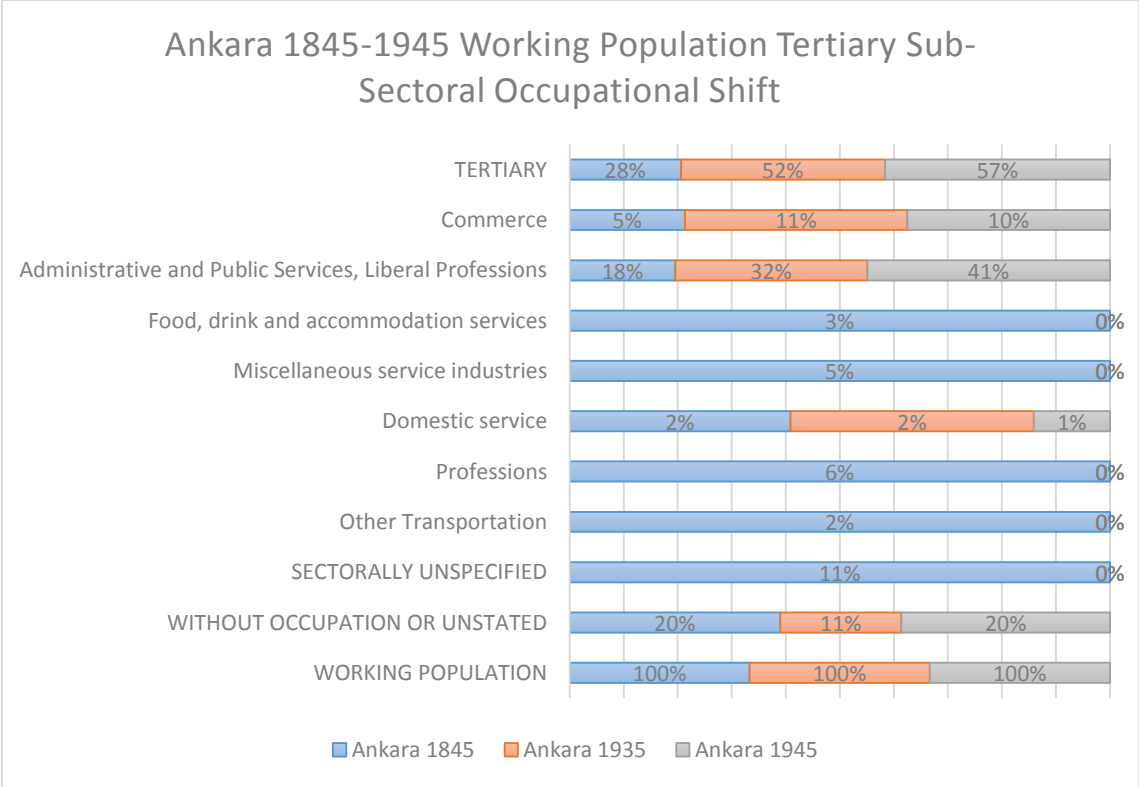


Chart 232- Ankara 1935-1945 Total Population, Both Sexes, Tertiary Sectoral Occupational Shift

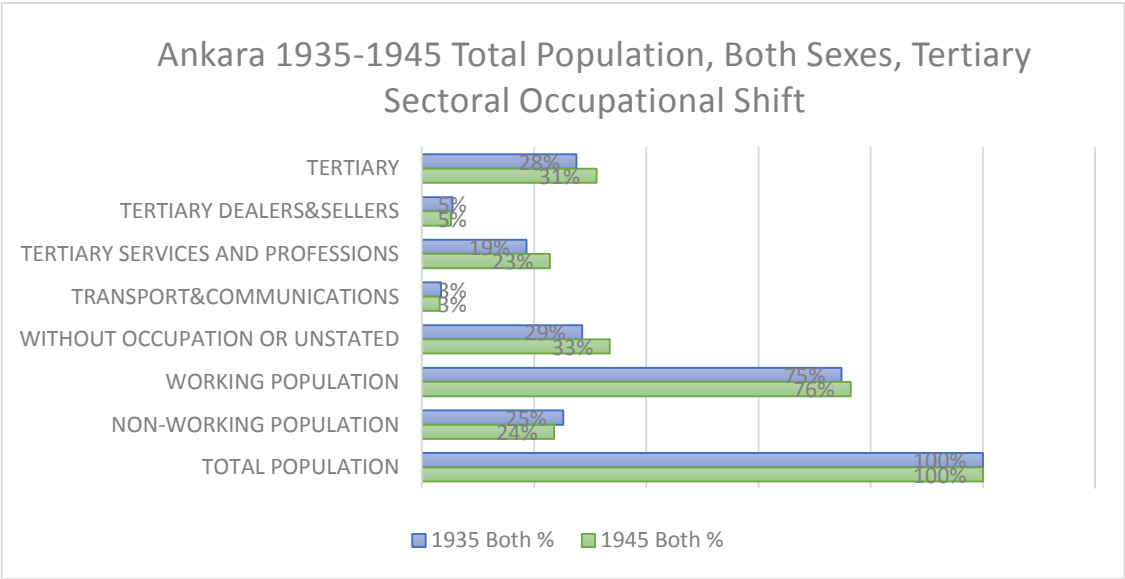


Chart 233- Ankara 1935-1945 Total Population, Both Sexes, Tertiary Sub-Sectoral Occupational Shift

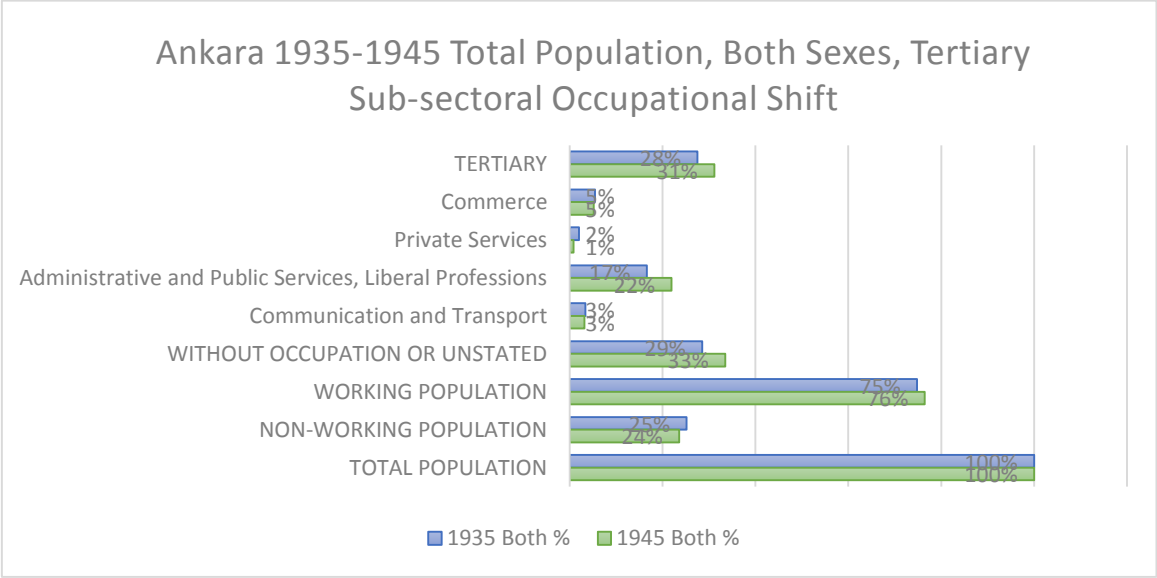


Chart 234- Ankara 1935-1945 Working Population, Both Sexes, Tertiary Sectoral Occupational Shift

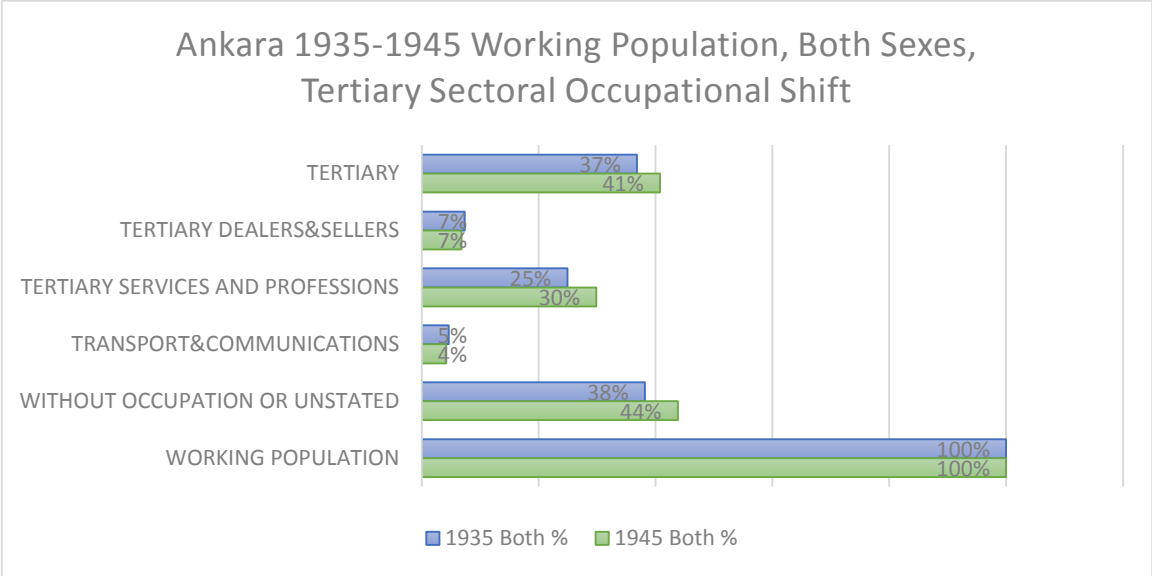


Chart 235- Ankara 1935-1945 Working Population, Both Sexes, Tertiary Sub-Sectoral Occupational Shift

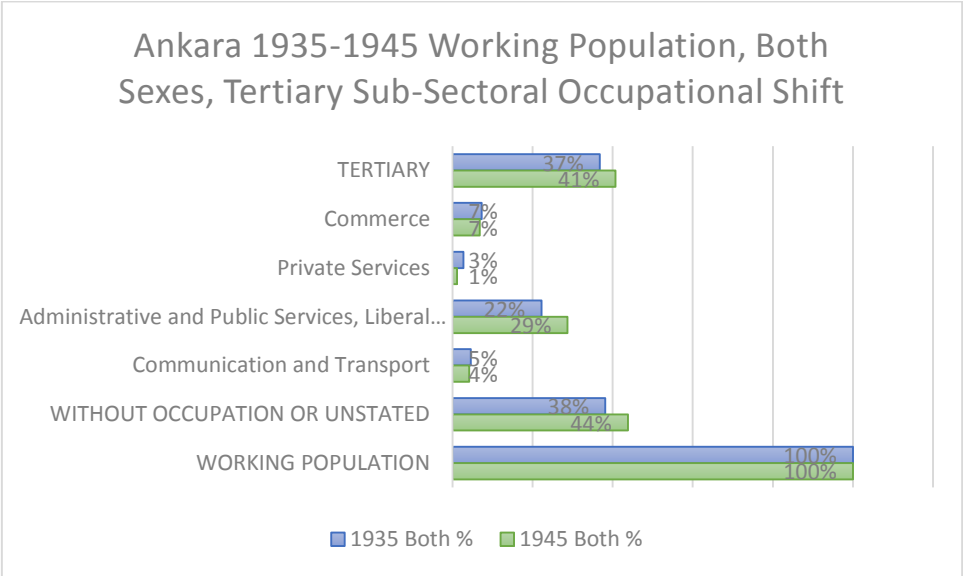


Chart 236-Ankara 1935-1945 Total Population, Males, Tertiary Sectoral Occupational Shift

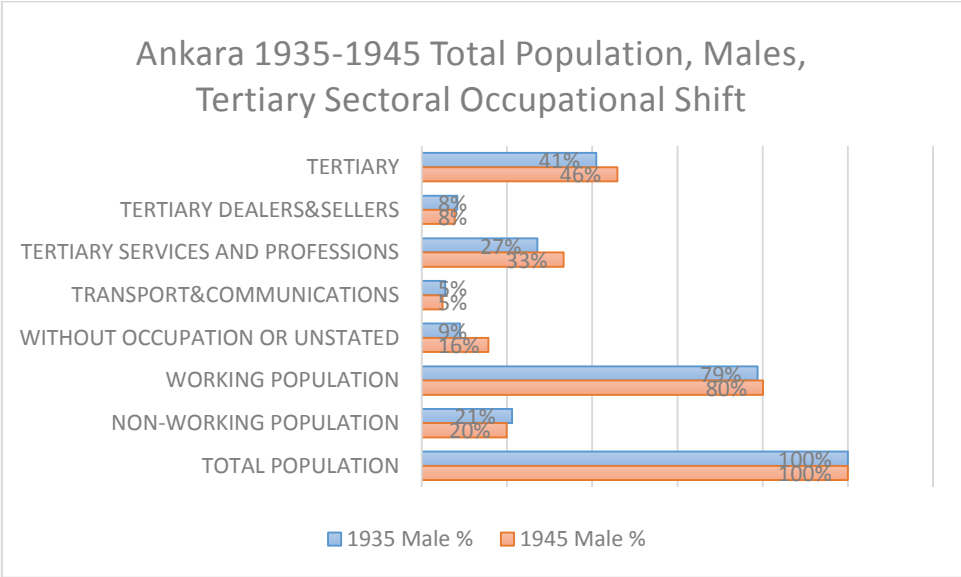


Chart 237- Ankara 1935-1945 Total Population, Males, Tertiary Sub-Sectoral Occupational Shift

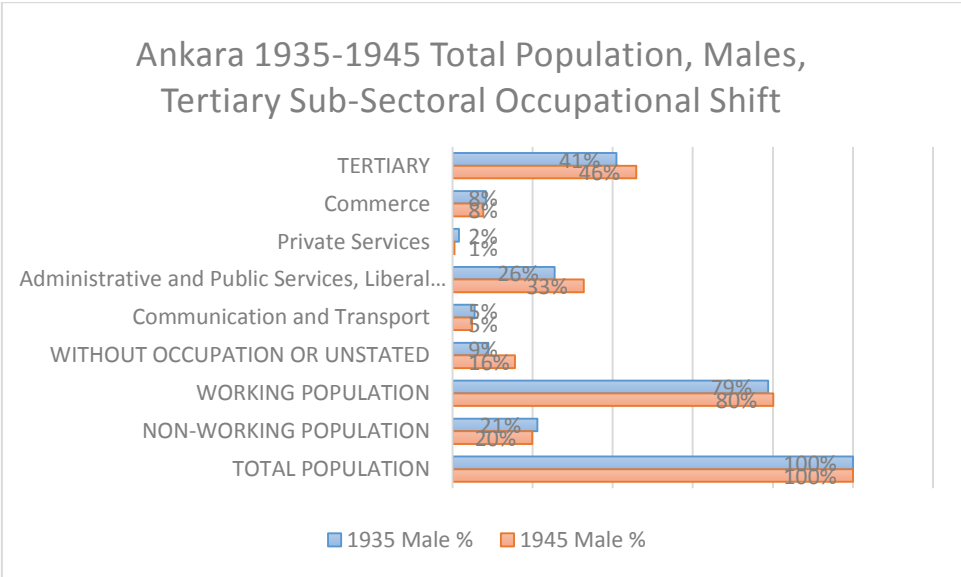


Chart 238- Ankara 1935-1945 Working Population, Males, Tertiary Sectoral Occupational Shift

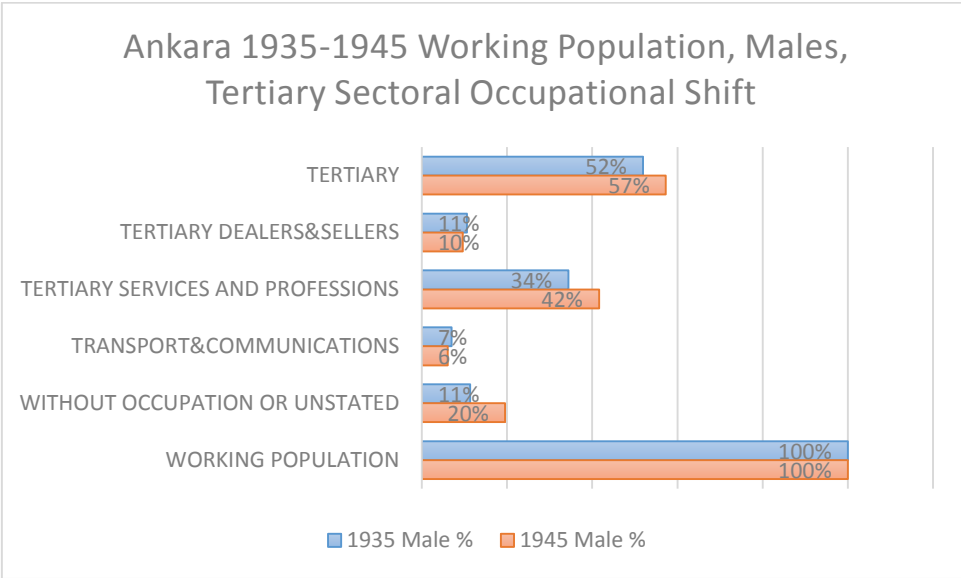


Chart 239- Ankara 1935-1945 Working Population, Males, Tertiary Sub-Sectoral Occupational Shift

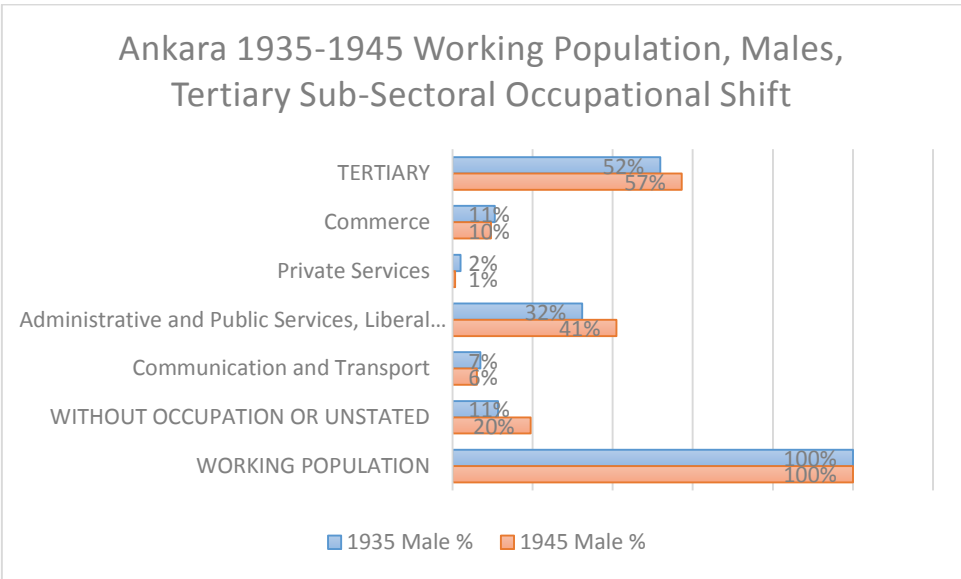


Chart 240- Ankara 1935-1945 Total Population, Females, Tertiary Sectoral Occupational Shift

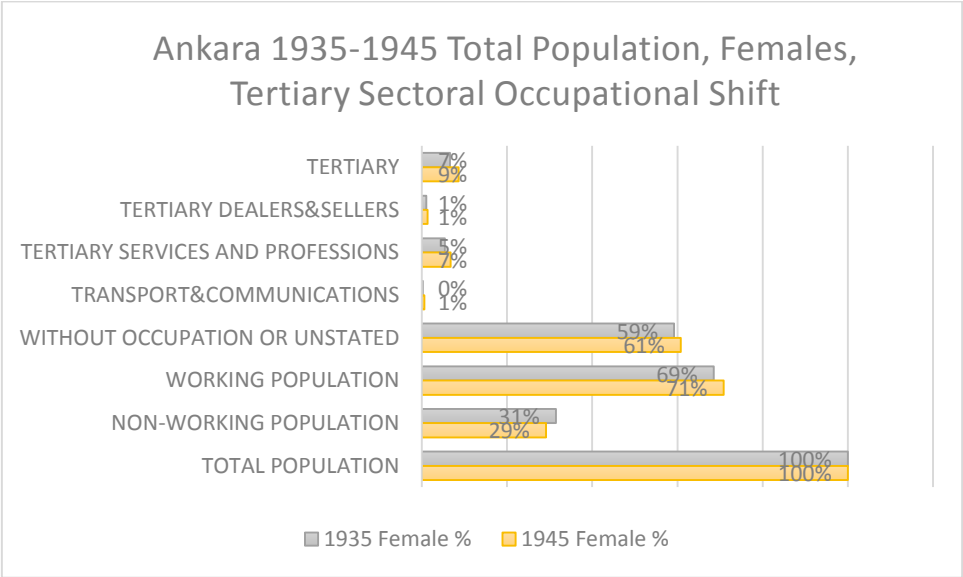


Chart 241- Ankara 1935-1945 Total Population, Females, Tertiary Sub-Sectoral Occupational Shift

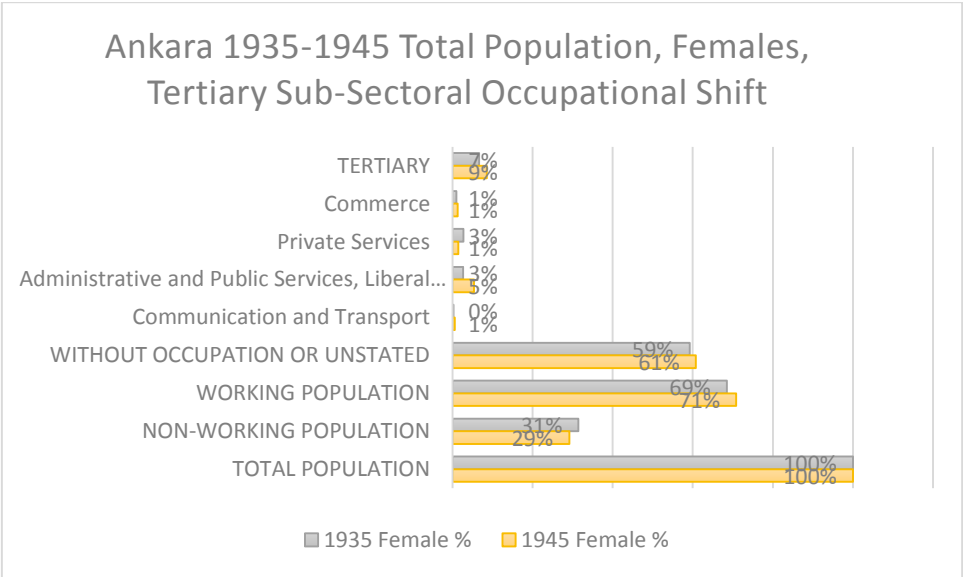


Chart 242-Ankara 1935-1945 Working Population, Females, Tertiary Sectoral Occupational Shift

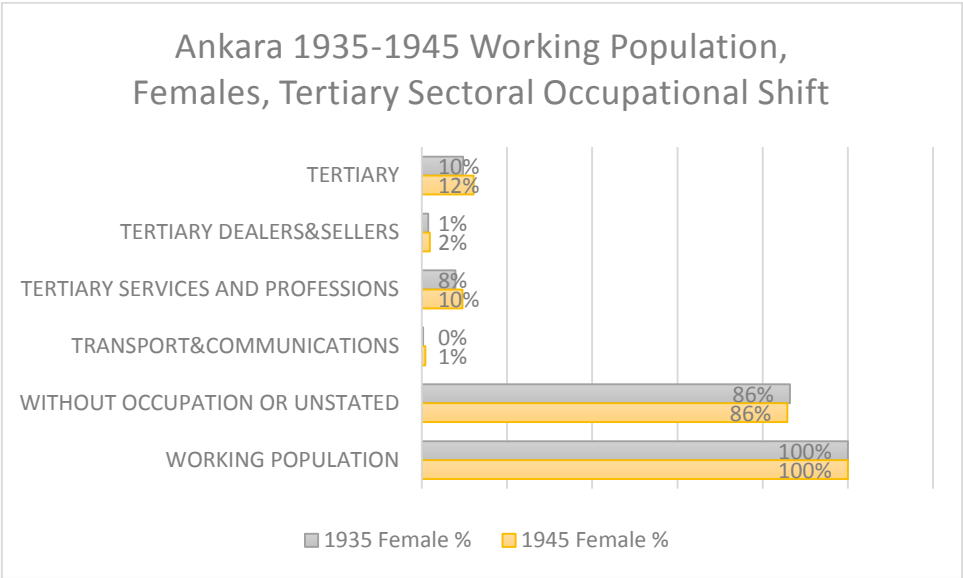
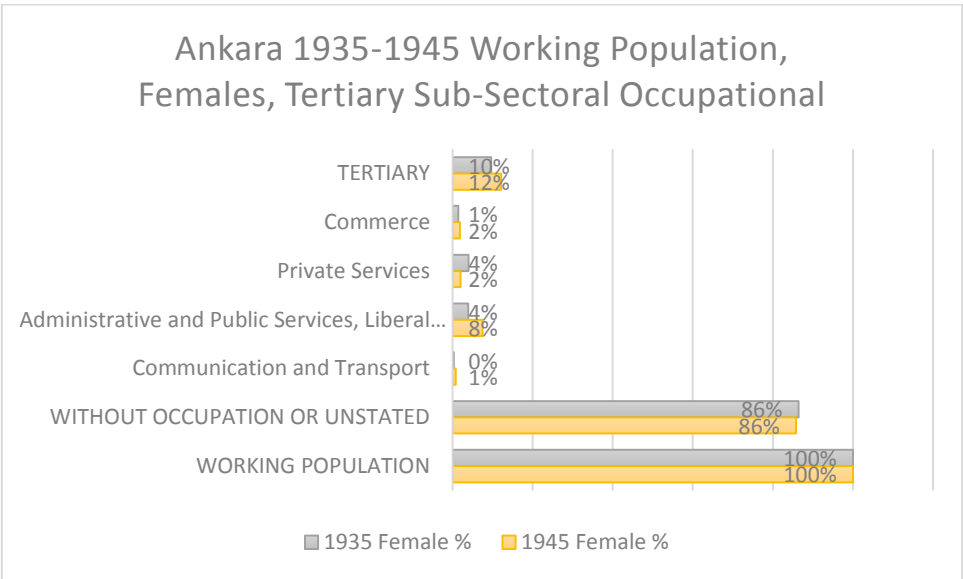


Chart 243- Ankara 1935-1945 Working Population, Females, Tertiary Sub-Sectoral Occupational Shift



Summary of Charts: Ankara 1845-1945 Tertiary Sub-sectoral Allocation

Overall, one could suggest that Ankara which had a relatively narrow tertiary sector in terms of the occupations of city population turn into a tertiary sector-oriented city within a hundred years from 1845 to 1945.

Among total population, in 1845, only %7 of the persons were a part of tertiary sector and until 1935, this figure has become %41 and in 1945, %46.

The main tertiary sectoral branch which could be hold accountable for this rise of tertiary sector among working male population was the tertiary services and professions.

Regarding tertiary sub-sectoral allocation, administrative and public services combined with liberal professions title has exhibited a huge rise from 1845 to 1945.

Discussion: Occupational Transformation in Ankara: 1845-1945

The results obtained from our analysis tells us that Ankara, which used to have some secondary sector basis back in 1845, in fact had a large tertiary basis and this tertiary sector share of the city would rise even more throughout the 100 year period between 1845 to 1945.

Regarding 1845 in Ankara, among secondary sector, where 1003 persons were recorded as having one of the secondary sector occupational subtitles, most prominent sectors are food industries and footwear. Although we know that due to mohair (tiftik) yarn processing and related activities were done around the city, probably these activities were taking ground around the peripheral regions and not within the city and therefore, have not been reflected in the tax registers. Probably, these industries were not concentrated within the city but around the peripheral regions. However, the remarkable presence of related industries as footwear or leather sub-sectoral occupations could be taken as an indicator of Ankara, having an industrial basis, mainly based on animal and related products. In fact, as İlhan Tekeli notes, Ankara was a kind of centre of these related products with animal husbandry and leather processing was rather deep rooted in the region.³³² Against this, it has been noted that according to 1830 general census, which was also containing data regarding occupational allocations³³³, occupations related to leather processing has been largely declined while most of the working population had occupations from various craftsmanship activities.³³⁴

³³²Tekeli, *Sanayi Toplumu İçin Sanayi Yazıları*, 130.

³³³We did not include this census due to reliability concerns and used here as only to give us an impression about the socio-economic situation prevalent at that data. More information on this census see Enver Ziya Karal, *Osmanlı İmparatorluğu'nda İlk Nüfus Sayımı 1831*, T.C. Başvekâlet İstatistik Umum Müdürlüğü ; Tetkikler Serisi, neşriyat no. 195. 87 (Ankara: T.C. Başvekâlet İstatistik Umum Müdürlüğü, 1943), 109–32.

³³⁴*Yurt Ansiklopedisi*, 541.

In 1845, tertiary service occupations has %20 of share among these observations and therefore, could not be neglected as well. Among them, a handful amount of persons who has occupations within food and accommodation (84), liberal professions (71) as well as transport and communication (98) reflects the traditional historical heritage industries which were stemming from Ankara being a transportation hub historically. Here, this also verifies Tekeli on his claim that the commercial life was not limited to animal husbandry and leather production. There were many guesthouses and similar accommodation services were available while traditional type of production has been retained until 1850s; in 1827 72 different types of handicraftsman 2331 workplaces were active.³³⁵

These results, interestingly very similar in the sense of occupational allocation when we compare them with the results obtained in Bursa. Primary sector related occupations' share were quite low while tertiary sector occupations, led by private services, tertiary dealers or liberal professions, is unexpectedly high. The only difference is perhaps, the allocations within the secondary sector in Bursa 1845, it was textiles leading the way while in Ankara, and it was more like animal husbandry related occupations more prominent. Another difference is remarkable when we look at their relevant literature: Bursa was responding to global capitalist international network requirements in terms of production during mid-19th century, de-industrialization claim comes much earlier for Ankara there was no marked recuperation attempt.

³³⁵Tekeli, *Sanayi Toplumu İçin Sanayi Yazıları*, 132.

According Akçura, who was an adherent of the ‘decline of industry due to de-industrialization’ perspective, after 1838 Balta Limanı treaty has been signed, the processing of mouir goat yarn was demolished. He suggests that until the end of 19th century, no mouir looms was left around. However, raw material export has continued, and in 1852 1,000,000 okka tiftik was exported. One should note that trade activities was not done by no longer Ottoman merchants anymore but minorities or English-Greek companies. This temporary solution was short lived since these raw materials were produced in rural areas and within a short period, merchants started to directly sell the products from the place they were produces and therefore, the production did not help the city to develop. While Ankara tiftiks were exported to S. Africa and Americas ³³⁶ and started to be grown also in these lands, wool prices, thanks to British industrial revolution and introduction of the technical novelties, were globally down.

During 1850 it was 60 kuruş, end of the period 8-10 kuruş. As a result of all these processes, Ankara monopoly on mouir goat and related products was broken. ³³⁷ While in 1827, there were 546 of weavers (‘şalçı’ or ‘scarf’ manufacturing) in 1895, there were 2304 handicraftsmen recorded but neither of them were weavers.³³⁸ Akçura cites from Vital Cuinet, that in 1892, there was a significant decline regarding the incomes from tiftik when compared with 12 years before. ³³⁹ Sevgi Aktüre notes that from the mid-19th century on production has been directed to demand raw material instead of food production and processing ³⁴⁰ and therefore, she adheres to de-industrialization narrative. ³⁴¹

³³⁶Julius Weyand, *The Angora Mohair Goat; a Condensed History of Its Introduction into This Country, the Practical Breeding, Handling and Shearing of Goats, the Uses and Values of Mohair, Pelts and Flesh*. ([Little Stony? Cal.: “Colusa sun” print, 1886), 132.

³³⁷Akçura, *Ankara*, 19–20.

³³⁸ *Yurt Ansiklopedisi*, 542.

³³⁹Cuinet, *La Turquie d’Asie*; cited by Akçura, *Ankara*, 20.

³⁴⁰Şevket Pamuk, “Kapitalist Dünya Ekonomisi ve Osmanlı Dış Ticaretinde Uzun Dönemli Dalgalanmalar 1830-1913,” *ODTU Gelişme Dergisi Özel Sayısı 1979-1980*, 1980, 161–204.

³⁴¹Aktüre, “Tarih İçinde Ankara,” 36–37.

What kind of inferences could we get from the census of 1927, regarding Ankara, while de-industrialization theme on the background? As we have observed in the previous section, from 1845 to 1927, among the working population of Ankara, there appears a decline in the secondary sector occupations and a corresponding rise in the primary sector occupations whereas, tertiary sector remain strong between these two data source years. Therefore, one could say that regarding the de-industrialization conception, the signs are much stronger than it is for Bursa.

While in 1845, the amount of tertiary services was around 1000, in 1927, nearly more than 20,000 persons were engaged in tertiary service occupations. According to Kandemir, around 10,000 of them were soldiers and army officers.³⁴² Nevertheless, it appears from our results that tertiary services and occupations have grown so much larger than secondary sector occupations. Therefore one could suggest that the footprints of de-industrialization could not be denied and in fact, stronger than Bursa, however, this did not lead to a total decline of all economic activity. In Bursa there was a large part of the city population engaged in secondary occupations and regarding the tertiary sector, Ankara being the capital is a great factor for this particular tertiary sector: ‘administrative services’ grew. Nevertheless, the city of Ankara continued to become an economically active city while its tertiary sector growing despite the fact that its growth was much more stemming from political reasons than Bursa.

Despite the strong halt in the secondary sector, in what ways, could this ‘continuation’ line of economic development in Ankara could be explained? One suggestion would be the enhanced

³⁴²Feridun Kandemir, *Ankara Vilayeti*, Türk Maarif Cemiyeti Neşriyatı ; Türkiye Seyahatnamesi no.1 (Ankara: Başvekalet Müdüvvenat Matbaası, 1932).

transportation capabilities as it was the case in Bursa. It has been noted that in 1892, like Bursa, railways system has reached Ankara and the changed the fate of the city. Near the station, many hotels were built and same type of business were run.³⁴³

There were other indicators that the city was becoming a more Western-type urbanized city; for instance in 1869, the first printing press was established and Provincial Newspaper was printed. In time, it would develop and new machines were brought from abroad which could print 1200 per hour, an indicator of a strong demand for newspaper.³⁴⁴ Regarding manufacturing technology, steam-powered mills reached very late (1890), perhaps a little bit later than Bursa.

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In 1902 there were 2188 shops, 260 magazines, 33 guesthouses, 21 bakeries, 12 mills, 1 factory flour. 8 rendering plants place, 10 brick makers' shops, 19 coffee shops and 1 salhanep.³⁴⁶

By the construction of railroad, two turning machine to process metals has been brought into the city. Imalat-I Harbiye (Weaponry and Armaments Workshop) was built, originally in Eskişehir. In 1921, weaponry factories were carried to Ankara.³⁴⁷ These provided a solid basis for later industries; these were turned to Machine-Chemical Industry.³⁴⁸

³⁴³Aktüre, "Tarih İçinde Ankara," 53.

³⁴⁴Ahmet Fehim and Hafi Kadri Alpman, *Ahmet Fehim Bey'in hâtıraları*, Tercüman 1001 temel eser 100 (İstanbul: Tercüman, 1977); cited by Tekeli, *Sanayi Toplumu İçin Sanayi Yazıları*, 133.

³⁴⁵Tekeli, *Sanayi Toplumu İçin Sanayi Yazıları*, 133.

³⁴⁶Sevgi Aktüre, *19. Yüzyıl Sonunda Anadolu Kenti Mekansal Yapı çözümlemesi* (Ankara: ODTU Mimarlık Fakültesi Baskı Atolyesi, 1978), 128.

³⁴⁷Tekeli, *Sanayi Toplumu İçin Sanayi Yazıları*, 133.

³⁴⁸Mehmet Kemal Kurşunluoğlu, *Türkiye'nin Kalbi, Ankara* (Cağaloğlu, İstanbul: Çağdaş Yayınları, 1983), 29–30.

Being chosen as capital, the fate of Ankara has been hugely changed. First of all, there was an immensely improving armament and weaponry industry; around this core, there were workshops which were giving supplementary support, i.e. in 1923, there have been established a fişek factory (explosives) as well as carpentry to be used within armament industry.³⁴⁹

The fast rise in the population during the 1920s has accelerated after hard war years between 1910 and 1920, and reached almost %6 per year. While the population was growing, largely by the in-migration of army officers and bureaucrats from Istanbul, residency became an important problem; in these conditions, it would not be surprising that building and construction sector would boom. ³⁵⁰ It is interesting however, this rise in building industry would not be reflected in our results. 1926 Nilsand Winter, a Denmark company opened an electricity generation facility central and through 1920s, many heavy-industry related factories and workshops built, established opened and run. ³⁵¹

As Tekeli indicates, these developments does not mean that Ankara became a full-fledged industrial centre. Despite all, industrial developments in Ankara were limited. During the five years plans of 1934 plans, Ankara was not thought as a dense centre of industrial production. ³⁵²He can note here that like it was the case for Ayhan Aktar or Leila Erder for Bursa, İlhan Tekeli inherently render the industrialization of Ankara as a crippled, a failed case.

³⁴⁹Aktüre, *19. Yüzyıl Sonunda Anadolu Kenti Mekansal Yapı çözümlemesi*, 135.

³⁵⁰ Tekeli, *Sanayi Toplumu İçin Sanayi Yazıları*, 134.

³⁵¹Ibid. 135.

³⁵² Ibid., 358.

According to Seyyah Kandemir travelogue (*seyahatname*), in 1930, there were registered merchants (*tüccar*) were 650 and craftsman (*küçük esnaf*) 1500. Now, artisanal production, including the woollen cloth manufacturers or chally weavers has virtually disappeared from all towns among the province, including the city of Ankara. ³⁵³

Between 1935 and 1945, we observe that the population of Ankara have risen from 91823 up to 109784. Comparing with earlier periods and other census figures, like of 1927 for instance, the population growth is immense. While in every branch of occupational sub-sectors, we observe rising figures, the most remarkable growth in terms of shares could be seen as the increment in tertiary services and professions. Earlier in 1935, tertiary services and professions have already became the first among all other occupational sub-sectors but in 1935, the number of people who were having an occupation within tertiary sector has been aggravated. We must notice that secondary sector occupations go lower in shares as well as primary sector occupations and both of these falls were despite the number of people who were engaged in such occupations actually rose. Therefore, the newly arriving population seems to be inclined to have a tertiary sector occupation and not secondary related activities. This was not because secondary sector was exhausted and its marginal productivity has reached to its limits; it was a transformation, more like from primary sector to tertiary sector in nature.

However, while looking at the composition of secondary sector or the sub-sectoral allocations, it would be impossible to miss the catch the effects of the newly established factories and the five year plans. Generally heavy industry related activities were to be flourished; for instance

³⁵³Kandemir, *Ankara Vilayeti*, 47.

machine and tools, making and operation, iron and steel manufacture and products as well as electricity generation and supply occupational substyles exhibit a significant rise in terms of people who has an occupation within these sectors while textiles, clothing and food industries remain low in density. However, these initiatives were to be short-lived. When we come to 1945, the secondary sector rises in amounts but nevertheless, stays back in shares. Instead, it was the tertiary sector, becoming more prominent from 1935 to 1945.

Regarding tertiary sector, probably the most remarkable change was the aggressive rise in the administrative and public service and there is not really surprising facts here. While communication and transport as well as commerce is stagnant or perhaps declining in terms of occupations, due to central administrative role in Ankara hinders us to see beyond the rise in administrative roles.

Verdict: Occupational Transformation in Ankara: 1845-1945

In this section we gave an attempt to check two alleged phenomena regarding Ottoman and Turkish industrialization process via transformation in the occupational structure, in the city of Ankara.

In 1845, we observe that in the city of Ankara, the number of persons who were engaged in primary sector was low while tertiary sector appears to be stronger than expected. This was a similar cases to Bursa where a considerable secondary and tertiary sector activities appeared within the results of our analysis. The difference lays within the composition; Bursa was excelling in textile production while in Ankara it was more like animal husbandry products like leather related activities.

When we come to 1927, we should notice that Ankara population rose due to influx of people, especially after Ankara has been announced has the centre of the Great Independence War. This political event disrupts our analysis nevertheless but as it was the case in Bursa, stagnation regarding secondary sector activities could be depicted. Thus, de-industrialization once again was displaying its features. Since the new arrivals to the city were mostly bureaucrats or state officers from İstanbul and Ankara has been turned into an administrative centre, it remains unclear whether tertiary sector activities points to a lively commercial life and occupational transformation despite decline in the secondary sector. This point would remain inconclusive however, it would not be totally wrong to conclude the case as a ‘partial de-industrialization’.

Between 1935 and 1945, it was our primary interest whether the etatist turn provided an impulse for the occupational transformation. Some positive effects in terms of employment could be obtained from the relevant chart since in secondary sector, many sub-sectoral titles have more people, having occupations as such, especially in heavy-industry related machinery, stone and mineral processing industries as well as, wood industries. Regarding the consumption goods, the strong share of clothing industry is worth regarding. However, the loss of share regarding secondary sector activities points to a possible objection for the etatist narrative. The change in policies and the new establishments could hardly be deemed as ‘game-changer’ or could not held as responsible for the change in the occupational structure. The lowering numbers and shares of persons who were primarily dealing with agriculture is pointing to an evidence of industrialization, but rise of tertiary sector ahead of secondary sector shows us that it was administrative and political changes behind the occupational transformation in Ankara.

Conclusion

In this thesis project, it was my intention to problematize the industrialization concept and to check whether different ways and patterns would appear within different contexts. For this reason, I have chosen two different countries, Russia and Turkey and two different cities from each; chose occupational structure as the index that we would track. The idea was to put four different cases of industrialization in a 'late-industrialization' setting together and see in what extent, their industrialization experiences resemble the presumably 'core' case of industrialization where the occupational structure would move from primary to secondary and secondary to tertiary sectors.

As I have argued in the text, the mainstream approach regarding industrialization process as an 'economic and social phenomena' has generally been in a mechanistic way; while productivity growth in agriculture would transmit to other, more derivative industrial activities like manufacturing or services, the agricultural sector would release surplus labour to first manufacturing and then tertiary labour. Most of all, this process was assumed to happen in almost everywhere in the same way providing that all the technical, legal and institutional preliminary conditions in the sense of W.W. Rostow has been satisfied. Against this, we suggest here that industrialization is a multifaceted process and instead of a sudden burst, provided by a particular series of conditions, a gradual process which could change direction into several different ways but nevertheless, it is a continuous line.

My critical approach to the orthodox way of understanding the industrialization phenomena, methodologically, underlines two problematic aspects: the unit of analysis and the tool of analysis. Regarding the former, I opted for the the city level setting, instead of national borders in order to conduct an analysis of industrialization process. Regarding the latter, instead of working on national income accounts, I chose the occupational data which were to be found in census records and tax surveys in order to reach a qualitatively more elaborate, refined and reliable inferences. In my opinion, regarding local contexts, these findings made these claims and suggestions above, defensible.

In the most general account, my findings relating to the attempted analysis suggest that industrialization process was in fact, a rather gradual process rather than a discrete boom and depending on much more factors than it has early been presumed. With respect to this premise, I suggest that the association between industrialization and the occupational transformation could develop in various different ways and not just it has been assumed in previous studies, the mainstream way, the orthodox understanding of the structural transformation or the Petty's Law, formulated into neoclassical version by Colin Clark and tested empirically by Simon Kuznets.

Interestingly, for both local contexts in their relevant mainstream literature, one could depict the similarities in terms of economic developments; both of these countries were having a relatively prominent position within the international economic and political system throughout 15th to 18th centuries but since the beginning of 19th century, they struggled to keep up with the

Western world in terms of economic developments. Both of them having booms and busts during the 19th century in terms of industrialization pace, stemming from different reasons.

For Russia, according to mainstream literature, it was the serfdom that was hindering industrialization and social transformation. For the Ottoman case, it was deindustrialization process that has chained the modern industrial manufacturing sector and became an obstacle on the way to its growth. Both of the ruling agencies responded to the relevant conditions and came up with initiatives to cope up with the ‘industrialization problem’. While in Russia, it was the railway construction initiative popped up as a temporary remedy, in Ottoman case, the state effect was not that strong. Nevertheless, there have been efforts, despite their failure, to bring full scale industrialization.

Despite all efforts, both countries found themselves in a hard position at the turn of the century. For Russia, allegedly, there was an agrarian crisis; deteriorating life conditions in the rural parts and the problems of food provision in the cities were implying the relatively unsuccessful attempts on bringing full scale industrialization. Accordingly, neither Ottoman nor Tsarist Russia would be regarded as having technologically advanced, urbanized counties which were moving on the correct line of *industrialization proper*. Both of the countries have hardships during the twenty years period between 1900 and 1920 roughly, both economically as well as socially. The unsuccessful attempt of a revolt in Russia (1905) was accompanied by two severe crises and fall on the prices had deep impacts on the economy while in Ottoman Empire, Committee of Union and Progress managed to take reins and intended to start yet another industrialization movement. There have been recuperations for all four cities starting with 1910

and 1914 but the outbreak of war would start a new period of stagnation. The newly established Turkish Republic, controlled by Republican Party did not follow a revolutionary way during 1920s and kept its economy open, maintaining a rather liberal line. Bolsheviks, once failed in their outright communism attempts in the War Communism years, took a step back to come terms with petty bourgeoisie and peasantry. This would lead to a recuperation regarding increasing outputs, a development in the 'industrialization' in the limited sense.

Ivanovo in Russian case, like Bursa in the Ottoman case, was traditionally known as a more like commercial centre than agricultural town. Both of these cities enjoyed goods spells during the first half of 19th century, based on textile manufacturing; they were both specialized in only one type of industrial activity: for Ivanovo it was cotton textiles while for Bursa, it was silk reeling.

Both of these cities had relatively hard years between 1900 and 1910 and a small recuperation period between 1910 and 1914, until the First World War. Regarding their traditional industries, while Ivanovo would manage to produce in pre-war levels in NEP years, such a recovery would never be possible for Bursa. Even though the etatist turn, that is a series of alleged economic impulses implemented by Turkish government in the form of protective tariffs and sometimes direct state investment would not bring satisfactory results. The important part is the following: despite all, both cities had similar trajectories in terms of occupational structure. While relatively strong secondary sector occupations have been observed among their populations in mid-19th century, accompanied by a very low rate of agricultural population by occupation, a surprisingly high figure regarding the number of people who had tertiary sector occupations, as

dealers or from various liberal professions has been observed. Perhaps the most important finding obtained from this analysis was that despite all the hardship and stagnation in the manufacturing industry by the beginning of 20th century, the occupational transformation did not stay stagnant, especially regarding secondary and tertiary sector. In time, for Ivanovo; secondary sector would be dominated by females and interestingly, this is just the opposite for Bursa.

However, this does not change the overall trend in terms of occupational transformation. Regarding manufacturing for both of them, more heavy-industry related activities as machine and tool making would rise but the tertiary activities would definitely keep rising while changing composition where more administrative roles would dominate the liberal occupations and commerce. In Ivanovo, industrialization seems follow a more orthodox path after the second half of mid-19th century, the occupations move from secondary to tertiary however in Bursa, this appears as a transition from primary to tertiary. The high level of secondary and tertiary level activity detected in 1850 demonstrates us, in a subtle way, the possible positive effects of urbanization on the progress occupational transformation. The high level of tertiary level activity and population growth depicted towards 1920s was probably as a result of mixed factors like enhanced transportation probabilities and some administrative changes. These findings points that industrialization process only partly plays a role in the occupational transformation here, other two possible factors, transportation and urbanization arises for further inquiry.

There were also other interesting features of this comparison. The highest rates in population rates were recorded between 1897 and 1926 for Ivanovo although this was not outright 'industrialization' period of Ivanovo which has taken place perhaps, fifty years earlier. Why Ivanovo was more heavily dominated by secondary sector while Bursa did not? Perhaps a tariff protection made things relatively easy for Ivanovo manufacturing. Interestingly, de-industrialization phenomena was not an issue for Ivanovo; the technological advancements in fact, did not hinder for the industry to grow—perhaps the larger domestic market could stand as a factor.

Regarding Ekaterinburg and Ankara, once again, there were important similarities in terms of occupational change. Both cities were historically located on trade ways, Ankara was important for West-East trade while Ekaterinburg was a 'window opening to Asia'. However, one should not also neglect that Ekaterinburg was in the middle of heavy-industry related region whereas Ankara had a monopoly on a special type of goat, mohair yarn. The common point is that these two industries lost prominence by 19th century. While two cities had an extensive tertiary sector beyond their high share of secondary sector, when we come to 20th century, one should expect there must be a turn back to agriculture or at least, a stagnation in the secondary and tertiary sector expansion. In Ankara this was partly true and regarding 1920s and on, it would be hard to judge whether its tertiary sector occupations expanded due to city improving its trade or administrative role. For Ekaterinburg, occupational transformation from secondary sector to tertiary, almost uninterrupted.

These findings shows us occupational structure transformation can go in various way; while it could go as it has been previously thought, from primary to secondary and tertiary but also, other options are possible. From primary to secondary and a sudden turn to tertiary while secondary sector despite occupations did not have developed extensively. The industrialization process, when looked through occupational transformation could be assessed much more clearly, instead of national income methods. The small scale industries could be more vital than they have previously been assumed while they do not need to transform themselves into large-scale industries, could provide a strong continuity in economic progress.

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