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Development of the service sector in Poland compared to other European Union countries: an extended analysis

Abstract
Introduction. In the recent years, many changes in the economic transformations that can be treated as evidences of the country's economic development were observed in the European Union member states. The service sector also experienced many changes. The nature of services is constantly changing, new types of services keep appearing, but at the same time many of them suffer from lack of demand and disappear. The role of services is more and more significant in the socio-economic development as well as in individuals' lives, hence, this is a relevant issue and should be studied extensively.
The purpose of the paper is to discuss the transformations taking place in the services sector in Poland against other European Union countries and to analyze internal changes within the sector.
Methods. Taken in this paper attempt to assess the development of the services sector is based on the analysis of the economic indicators, mainly the gross value added and employment rates. The study presents the results of the research on the development of the service sector in years 2009-2019. The directions and scope of changes taking place in particular services sector sections were analyzed.
The results of the conducted research show that the determinant of the level of the service sector development is not only its high share in the three-sector structures, but also internal changes observed in the sector itself. The individual sections contribution to the creation of the gross value added and the level of employment vary greatly. The dominant activity among service entities in terms of value added is commercial activity. Moreover, the analysis of the service sector identifies which sections have the greatest impact on the service sector development. These sections include: wholesale and retail trade, transport and warehouse management, as well as professional, scientific and technical activities.
Conclusion. Based on the research, it was found that the share of the service sector in the structures of economies of highly developed countries is prevailing. It is indicated by the increase in employment in this sector, the growing share in the creation of gross value added, as well as the number of service enterprises. The service sector stimulates the development of the economy, and its condition proves the dynamics of social and economic development.
Keywords: Service Sector; Gross Value Added; Employment in the Service Sector; Wholesale Trade; Retail Trade; Transport; Warehouse Management; Scientific And Technical Activity
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Розвиток сфери послуг у Польщі порівняно з іншими країнами Європейського Союзу: розширений аналіз

Анотація
Вступ. В останні роки в країнах-членах Європейського Союзу спостерігалося багато змін в економічних перетвореннях, які можна трактувати як свідчення економічного розвитку країн. Сфера послуг також зазнала багатьох змін. Характер послуг постійно змінюється, нові види послуг постійно з'являються, але в той же час багато з них страждають від нестачі попиту й зникають. Роль послуг стає все більш значущою в соціально-економічному розвитку, а також у житті людей, отже, це актуальне питання, яке слід широко вивчати.
Метою статті є обговорення трансформацій, що відбуваються в секторі послуг Польщі, у порівнянні з іншими країнами Європейського Союзу та аналіз внутрішніх змін у секторі.
Методи. Спроба оцінити розвиток сектору послуг у цій статті базується на аналізі економічних показників, переважно валової доданої вартості та рівня зайнятості. У дослідженні представлені результати дослідження розвитку сектору послуг у 2009–2019 рр. Проаналізовано напрямки та масштаби змін, що відбуваються в окремих сегментах сектору послуг.
Результати проведеного дослідження показують, що визначальним рівнем розвитку сектору послуг є не лише його висока частка в трисекторних структурах, а й внутрішні зміни, що спостерігаються в самому секторі. Внесок окремих видів послуг у створення валової доданої вартості та рівень зайнятості дуже різняться. Домінантною діяльністю серед суб'єктів послуг з точки зору доданої вартості є комерційна діяльність. Більше того, аналіз сектору послуг визначає, які саме його сегменти мають найбільший вплив на розвиток сфери послуг, а саме: оптова та роздрібна торгівля, транспорт й управління логістичними центрами, а також фахова, наукова й технічна діяльність.
Висновок. На основі досліджень було встановлено, що частка сектору послуг у структурах економік високорозвинених країн переважає. На це вказує збільшення зайнятості в сфері послуг, зростання частки послуг у створенні валової доданої вартості, а також зростання кількості підприємств сфери послуг. Сфера послуг стимулює розвиток економіки, а її стан характеризує динаміку соціально-економічного розвитку.
Ключові слова: сектор послуг; валова додана вартість; зайнятість у секторі послуг; оптова торгівля; роздрібна торгівля; транспорт; управління логістичними центрами; наукова й технічна діяльність.

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Развитие сферы услуг в Польше по сравнению с другими странами Европейского Союза: расширенный анализ
Аннотация
Введение. В последние годы в государствах-членах Европейского Союза наблюдалось множество изменений в экономических преобразованиях, которые можно рассматривать как свидетельство экономического развития стран. Сфера услуг также претерпела изменения. Характер услуг постоянно меняется, появляются новые виды услуг, но при этом многие из них страдают невостребованностью и исчезают. Роль услуг становится все более и более значимой в социально-экономическом развитии, а также в жизни людей, поэтому это актуальный вопрос, и его следует тщательно изучить.
Цель статьи – обсудить трансформации, происходящие в секторе услуг в Польше по сравнению с другими странами Европейского Союза, а также проанализировать внутренние изменения в этом секторе.
Методы. Предпринятая в данной статье попытка оценки развития сектора услуг основана на анализе экономических показателей, в основном валовой добавленной стоимости и уровня занятости. В исследовании представлены результаты исследования развития сектора услуг в период с 2009 по 2019 гг. Проанализированы направления и масштабы изменений, происходящих в отдельных сегментах сектора услуг.
Результаты проведенного исследования показывают, что определяющим фактором уровня развития сферы услуг является не только его высокая доля в трехсекторных структурах, но и внутренние изменения, наблюдаемые в самом секторе. Вклад отдельных видов услуг в создание валовой добавленной стоимости и уровень занятости сильно различается. С точки зрения добавленной стоимости доминирующей деятельностью среди предприятий сферы услуг является коммерческая деятельность. Более того, анализ сектора услуг определяет, какие сегменты имеют наибольшее влияние на его развитие, а именно: оптовая и розничная торговля, управление транспортом и логистическими центрами, а также профессиональная, научная и техническая деятельность.
Выводы. На основе исследования было установлено, что доля сферы услуг в структурах экономик высокоразвитых стран является преобладающей. Об этом свидетельствует рост занятости в этом секторе, растущая доля в создании валовой добавленной стоимости, а также количество предприятий сферы услуг. Сфера услуг стимулирует развитие экономики, а ее состояние характеризует динамику социально-экономического развития.
Ключевые слова: сфера услуг; валовая добавленная стоимость; занятость в сфере услуг; оптовая торговля; розничная торговля; транспорт; управление логистическими центрами; научная и техническая деятельность.

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Analiza rozwoju sektora usług w Polsce na tle innych krajów Unii Europejskiej: analiza zaawansowana Streszczenie
Wprowadzenie. W ostatnich latach obserwujemy wiele zmian w przemianach gospodarczych, które mogą świadczyć o rozwoju gospodarczym kraju. Przeobrażeniom ulega także sektor usług. Zmienia się charakter usług, powstają nowe rodzaje usług, a wiele nie mając racji bytu zanika. Usługi odgrywają coraz większą rolę w rozwoju społeczno-gospodarczym i życiu każdego człowieka, dlatego słusznym wydało się podjęcie takiego tematu.
Celem artykułu jest prezentacja przemian zachodzących w sektorze usług w Polsce na tle innych państw Unii Europejskiej oraz analiza zmian zachodzących wewnątrz samego sektora.
Metody. Podjętą próbę oceny rozwoju sektora usług oparto na analizie wskaźników ekonomicznych, głównie wartości dodanej brutto i poziomie zatrudnienia. W opracowaniu zaprezentowano wyniki badań rozwoju sektora usług w latach 2009-2019. Analizie poddano kierunki i zakres zachodzących zmian w poszczególnych sekcjach należących do sektora usług.
Wyniki i wnioski. Przeprowadzone badania pozwalają stwierdzić, że wyznacznikiem poziomu rozwoju sektora usług są nie tylko jego wysokie udziały w strukturach trójsektorowych, ale także wewnętrzne zmiany obserwowane w samym sektorze. Udział poszczególnych sekcji w tworzeniu wartości dodanej brutto i poziomie zatrudnienia jest bardzo zróżnicowany. Ponadto analiza sektora usług wskazała, które sekcje wykazują największy wpływ na rozwój sektora usług, mianowicie: handel hurtowy i detaliczny, transport i zarządzanie centrami logistycznymi oraz działalność profesjonalna, naukowa i techniczna. Na podstawie przeprowadzonych badań stwierdzono, że sektor usług stymuluje rozwój gospodarki, a jego kondycja świadczy o dynamice rozwoju społeczno-gospodarczego.
Słowa kluczowe: sektor usług; wartość dodana brutto; pracujący; handel hurtowy; handel detaliczny; transport; zarządzanie centrami logistycznymi; działalność naukowa i techniczna.

1. Introduction and Brief Literature Review

The development of the service sector is undeniable and means an increase in its share in the structure of employment and gross value added. The service sector due to undergoing changes is constantly a subject of research. The research on the development of the service sector requires a bipolar approach, meaning an analysis of changes of importance of the service sector viewed as an element of the three-sector economy and observations on the internal changes that occur within the sector (Clark, 1951; Fisher, 1935; Fourastie, 1945). The first approach has been widely discussed in literature, e.g. Flejterski (2005), Kłosiński (2002, 2005, 2009, 2011), Rogoziński (2000), Szczukocka (2013), the ongoing changes within the service sector however have been researched a lot less.

The purpose of this paper is to present the changes taking place within the service sector in Poland compared to other European Union countries.

In the paper are presented the changes that had taken place in the service sector in years 2009-2019 in particular sections in European Union countries. The choice of the research period resulted from the desire to continue previously commenced research on the service sector and limitations in data comparability due to the change from Polish Data Classification 2004 to Polish Data Classification 2007.

The service sector in Poland and other European Union countries was analyzed. There are many methods and measures used in research to assess the development of the service sector, but there is still no universal measure (according to Cieślik 2008, p. 158). Basic macroeconomic indicators were used to analyze the changes taking place in the services sector in 2009-2019, with particular emphasis on the share of the service sector in the working structure and gross value added produced by the service sector. The ongoing structural changes in modern economies are characterized by high complexity and defined in many ways (Węgrzyn, 2015, pp. 137-138; Roszko-Wójtowicz & Grzelak, 2020). According to Jasiński (2011, p. 15) and Van den Berg (2012, p. 25) sector structure is equated with the concept of gross domestic product and gross value added. While the changes taking place in the structure of these indicators are slow, they are towards the increasing importance of the service sector. The analysis of structural changes was carried out on the basis of data published by the Central Statistical Office of Poland and Eurostat.

In the 1980s in Poland the share of the employed and gross value added in comparison with developed countries of the European Union was small. In the 1990s the dynamic development of the service sector began. According to the Central Statistical Office, in 2019 in Poland the gross added value generated by the service sector accounted for 64.9% of the gross value added of the entire national economy, this sector employed 58.7% of all working people. The dominant activity, both in terms of gross value added (27.1%) and employment, is commercial activity (25.6%).

According to Eurostat data, employment in services in the Member States in 2019 amounted to 74%. The countries in which commercial activity amounted for 80% of total employment were the Netherlands, Great Britain, Belgium, Malta, France, Denmark, Cyprus and Luxembourg. For comparison, in Russia in 2010, 64.5% of employment was found in the services sector, and in 2020 it was 67.6%. In 2019, the gross added value produced by the service sector was over 73%.

Among EU countries the highest share of gross value added generated in the services sector was in Luxembourg (86.7%), Malta (85.3%) and Cyprus (83.6%). Due to the fact that the study focused on changes taking place in particular sections of the service sector, it is regarded appropriate to recall the classification. The service sector consists of units whose basic type of activity is classified according to the PKD (or Polska Klasyfikacja Działalności, which is a term used in Poland for the Polish Classification of Business Activities) in sections:

- G - Wholesale and retail trade; repair of motor vehicles, including motorcycles;
- H - Transport and warehouse management;
- I - Activities related to accommodation and catering services;
- J - Information and communication;
- K - Financial and insurance activities;
- L - Real estate activities;
- M - Professional, scientific and technical activity;
- N - Business administration and support activities;
- O - Public administration and national defense; compulsory social insurance;
- P - Education;
- Q - Healthcare and social assistance;
- R - Activities related to culture, entertainment and recreation;
- S - Other service activities;
- T - Households with employees; households producing goods, that provide services for their own needs;
- U - Extraterritorial organizations and teams.

2. Employees in the Service Sector in Poland Compared to other European Union Countries

In the literature, a lot of attention is paid to the sectoral structure of employment (D'Agostino, Serafini, & Ward-Warmedinger, 2006; Kwiatkowski, 1980). The comparison of employment structure in sectional layout shows the differences in this area. According to A. Skórska (2016), the research on structural changes in the labour market allows evaluating the development of the service sector. A slight but systematic decrease in the level of employment is noticed in most of the European Union countries in the section of trade and repair of motor vehicles (section G). In Poland in 2009, the share of people employed in section G in the total number of people employed in the service sector was 27%, and in 2019 it was just over 23%. Comparing the employment level in this section in 2009 with 2019, an upward trend can be observed in Malta, Belgium and Germany. In other countries, the situation remained unchanged or there was a slight decrease.

In the transport and warehouse management section (section H), the largest share of employees among the European Union countries in 2009 was noticed in Bulgaria (10%), the Czech Republic (11.6%), Estonia (12.8%), Latvia (13.3%), Lithuania (10.4%), Hungary (10.5%), Poland 10.4%), Romania (12.2%), Slovenia (10.2%), and Slovakia (11.6%). In other countries, the share of people working in section H in the total number of people working in the service sector was below 10%. When comparing the level of employment in this section in 2019 and 2009, attention should be paid to Malta, where there was an employment increase of 44%, Portugal with a 25% increase and Cyprus - 20%.

In activities related to accommodation and catering services (section I) in 2019, the highest share in the employment structure in the service sector was reported in Ireland (10.02%), Greece (13.3%), Spain (11.4%) and Cyprus (11.5%). Comparing the level of employment in this section in 2019 with 2009, we observe an increase in employment in all countries, with the exception of Slovenia, where a 6% decrease was observed.

The information and communication section (section J) deserves attention, the share of employees in each of the analyzed countries in the employment structure in the service sector is small. Nevertheless, from year to year we observe a dynamic increase in the level of employment in this section, with the exception of the Netherlands (decrease by 3%). Comparing 2019 with 2009, we notice a high increase in employment, in 19 countries the employment level in this section exceeded 30%.

In terms of financial and insurance activities (section K), Luxembourg is a country that stands out with employment in the service sector compared to other countries. The dynamics of those working in this section differentiate. In 2019 in comparison with 2009, the highest increase was observed in Malta (a 98% increase), Luxembourg (48%), Bulgaria, Estonia and Poland (about 20%).

A small share in the employment structure of the service sector (less than 2%) can be observed in the section related to real estate services (L). In a comparative analysis over the period from year to year in most countries we observe an increase in employment in this section. In 2019, compared to 2009, the highest increase in employment was recorded in Malta (over 200%), Latvia (138%), Portugal (96%) and Belgium (71%). A small share of the employed was also observed in services related to professional, scientific and technical activities (section M). In 2019, only Luxembourg (11.7%), Sweden (10.9%) and Cyprus (10.27%) exceeded the 10% share of employees in section M in the total number of people employed in services. The comparison over time gives better results in this case, in all countries except Greece (down 8%) we see an increase in employment.

In terms of administration services and supporting activities (section N), the lowest share of employed persons in 2019 among the European Union countries was observed in Greece (3.2%). Comparing the level of employment in 2019 with 2009, a decrease occurred only in Latvia (by 2%).

In section O - public administration, national defence and social security - the share of people employed in the European Union in the total number of people employed in services in 2009 exceeded 10% in 17 countries, whereas in 2019 the number of people employed in this section exceeded 10% in 11 countries. Comparing the level of employment in this section over the years, we also observe a systematic decline in employment. This conclusion may indicate the development of IT services and the transfer of employees to other sections.

Less than 10% of people were employed in education (section P) in 2019 were in Bulgaria, Germany, Spain, France, Italy, Cyprus, the Netherlands, Austria, Romania and Finland. When analyzing changes in the employment level in education in 2019 compared to 2009, a 10% decrease in employment took place in Bulgaria and Romania, 7% in Lithuania, 4% in Latvia and 1% in Greece.

Another section analyzed is health care and social assistance (Q), the highest (about 20%) share of employment in 2019 was observed in Belgium, Denmark, the Netherlands, Germany, France, Sweden and Finland. In the group of countries in which the share of employees in health care services was below 10% were: Bulgaria, Cyprus, Estonia, Latvia and Greece. In European Union countries the share of employment in activities related to culture, entertainment and recreation (section R) ranged from 2 to 4%, the exception was Malta with a 6% share of employment. Comparing the level of employment over time, only Greece saw a 9% decrease in employment. Due to the lack of complete data, section S, constituting of other service activities, was omitted in the analyses, section T, which includes households with employees, and section U (extraterritorial teams and organizations). Table 1 presents the classification of European Union countries in terms of the share of employees in particular sections in employment in the service sector. In each of the types of activity, three groups of countries were distinguished with the highest, medium and lowest share.

In each of the analyzed sections of the service sector, Poland is in the middle range, which proves the average level of development of the service sector. Research on changes in the service sector in years 1995-2012 was conducted by Dominiak and Henke (2015, pp. 35-36), who concluded that countries with a higher level of socio-economic development have a higher share of services based on knowledge, whereas the countries with lower level of development have a higher share of commercial, transport and catering services.

3. Gross Value Added Generated in the Service Sector in Poland Compared to Other European Union Countries

Similarly to how it was done with people working in the service sector, while analyzing the second indicator which is gross value added, the European Union countries were grouped into quite homogenous groups in terms of their share. Table 2 presents the division of the European Union countries into groups based on the share of gross value added by types of activity. Due to data availability, some sections have been grouped in the table. The highest average share for the 28 European Union countries, amounting to 19.3%, was observed in services related to trade, transport, accommodation and gastronomy. This value has not changed compared to 2009.

Table 1:
Share of employees in particular service sections in the service sector in 2019

Specification	Countries
Section G (Wholesale and retail trade; repair of motor vehicles, including motorcycles)	
20%-30%	Bulgaria, Spain, Greece, Croatia, Italy, Cyprus, Latvia, Lithuania, Austria, Poland, Portugal, Romania, Slovenia
10%-20%	Belgium, Czech Republic, Denmark, Germany, Estonia, Ireland, France, Hungary, Malta, Netherlands, Slovakia, Finland, Sweden, United Kingdom
Less than 10%	Luxembourg
Section H (Transport and warehouse management)	
10%-13%	Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia
7%-10%	Belgium, Germany, Croatia, Austria, Slovenia, Finland
Less than 7%	Denmark, Ireland, Greece, Spain, France, Italy, Cyprus, Luxembourg, Malta, the Netherlands, Portugal, Sweden, Great Britain
Section I (Activities related to accommodation and catering services)	
10%-13%	Ireland, Greece, Spain, Croatia, Cyprus
7%-10%	Bulgaria, Italy, Malta, Austria, Portugal, Slovenia, Slovakia
Less than 7%	Belgium, Czech Republic, Denmark, Germany, Estonia, France, Latvia, Lithuania, Luxembourg, Hungary, Netherlands, Poland, Romania, Finland, Sweden, United Kingdom
Section J (Information and communication)	
5%-7%	Czech Republic, Estonia, Ireland, Croatia, Luxembourg, Malta, Slovenia, Finland, Sweden, Great Britain
3%-5%	Belgium, Bulgaria, Denmark, Germany, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Hungary, Netherlands, Austria, Poland, Portugal, Romania, Slovakia
Section K (Financial and insurance activities)	
Over 6%	Cyprus, Luxembourg, Malta
4%-6%	Belgium, Germany, Ireland, France, Croatia, Austria, Poland, Portugal, Slovenia, Great Britain
2%-4%	Bulgaria, Czech Republic, Denmark, Estonia, Greece, Spain, Italy, Latvia, Lithuania, Hungary, Netherlands, Romania, Slovakia, Finland, Sweden
Section L (Real estate activities)	
2%-3%	Estonia, Latvia
1%-2%	Czech Republic, Denmark, Spain, France, Lithuania, Luxembourg, Malta, Netherlands, Austria, Poland, Portugal, Slovakia, Finland, Sweden, United Kingdom
Less than 1%	Belgium, Bulgaria, Germany, Ireland, Greece, Croatia, Italy, Cyprus, Hungary, Romania, Slovenia
Section M (Professional, scientific and technical activity)	
9%-12%	Italy, Cyprus, Luxembourg, the Netherlands, Finland, Sweden, Great Britain
6%-9%	Belgium, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Lithuania, Malta, Austria, Poland, Portugal, Slovenia
Less than 6%	Bulgaria, Latvia, Hungary, Romania, Slovakia
Section N (Business administration and support activities)	
6%-8%	Belgium, Germany, Spain, Italy, Malta, the Netherlands
4%-6%	Bulgaria, Czech Republic, Denmark, Estonia, Ireland, France, Croatia, Latvia, Lithuania, Hungary, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, United Kingdom
Less than 4%	Greece, Cyprus, Luxembourg
Section O (Public administration and national defence; compulsory social insurance)	
12%-15%	Greece, France, Luxembourg, Hungary, Slovakia
9%-12%	Belgium, Bulgaria, Czech Republic, Germany, Spain, Croatia, Cyprus, Latvia, Austria, Poland, Portugal, Romania, Slovenia, Sweden
Less than 9%	Denmark, Estonia, Ireland, Lithuania, Malta, the Netherlands, Finland, Great Britain, Italy
Section P (Education)	
12%-14%	Belgium, Estonia, Latvia, Lithuania, Hungary, Poland, Portugal, Slovenia, Sweden, Great Britain
10%-12%	Czech Republic, Denmark, Greece, Croatia, Luxembourg, Malta, Slovakia
8%-10%	Bulgaria, Germany, Ireland, Spain, France, Italy, Cyprus, Netherlands, Austria, Romania, Finland
Section Q (Healthcare and social assistance)	
Over 15%	Belgium, Denmark, Germany, Ireland, France, the Netherlands, Austria, Finland, Sweden, Great Britain
10%-15%	Czech Republic, Spain, Italy, Lithuania, Luxembourg, Hungary, Malta, Poland, Portugal, Slovenia, Slovakia
Less than 10%	Bulgaria, Estonia, Greece, Croatia, Cyprus, Latvia, Romania
Section R (Activities related to culture, entertainment and recreation)	
4%-6%	Estonia, Latvia, Malta
2%-4%	Belgium, Bulgaria, Czech Republic, Denmark, Ireland, Spain, France, Croatia, Cyprus, Lithuania, Hungary, Netherlands, Austria, Poland, Portugal, Slovenia, Slovakia, Finland, Sweden, United Kingdom
Less than 2%	Germany, Greece, Italy, Luxembourg, Romania

Source: Own study based on Eurostat data

Information and communication services accounted for 5.0%, compared to 2009 their share increased by 0.3%. The share of financial and insurance services amounted to 4.5%, which in comparison to 2009 proves the share decreased by 0.7%. In the case of services related to the real estate market, their share in the analyzed period remained unchanged and amounted to 10.8%. Comparing 2019 with 2009, a significant difference is noted in professional, scientific and technical activities as well as activities in the field of administration services and supporting activities, in 2009 it was 10.2%, while in 2019 there was an increase to 11.3%.

Share of service value: public administration and national defence; compulsory social security; education; health care and social assistance in gross value added in the analyzed period remained at a similar level - 19%. The average share of services included in the last group of services related to culture, entertainment and recreation and other service activities amounted to 3.3%. For comparison, gross value added in Russia in 2019 in individual sections of the service sector was as follows:

- wholesale and retail trade, transport, accommodation and food service activities - 21.2%;
- information and communication - 2.6%;
- financial and insurance activities - 4.2%;
- real estate activities - 9.5%;
- professional, scientific and technical activities; administrative and support service activities - 6.5%;
- public administration, defence, education, human health and social work activities - 14.1%;
- other kinds of activities - 2.2% (Yearbook of International Statistics, 2020).

In order to present a detailed characteristic of changes in the structure of the service sector, changes in the share of individual service sections in terms of gross value added (GVA) are presented in Figures 1-7.

Table 2:
Share of gross value added by types of activity in gross value added in the services sector in 2019

Specification	Countries
Section G, H, I (Trade, transport, accommodation and catering)	
Over 24%	Lithuania (32.2%), Greece, Poland
20%-24%	Bulgaria, Denmark, Estonia, Spain, Croatia, Italy, Cyprus, Latvia, Malta, Netherlands, Austria, Portugal, Romania, Slovenia, Slovakia
Less than 20%	Belgium, Czech Republic, Germany, Ireland, France, Luxembourg, Hungary, Finland, Sweden, Great Britain
Section J (Information and communication)	
6%-8%	Bulgaria, Estonia, Ireland (12.1%), Malta, Finland, Sweden, Great Britain
4%-6%	Belgium, Czech Republic, Denmark, Germany, Spain, France, Croatia, Cyprus, Latvia, Luxembourg, Hungary, Netherlands, Romania, Slovenia, Slovakia
Less than 4%	Greece, Italy, Lithuania, Austria, Poland, Portugal
Section K (Financial and insurance activities)	
Over 7%	Ireland, Cyprus, Luxembourg (26.5%), United Kingdom
4%-7%	Belgium, Bulgaria, Czech Republic, Denmark, Spain, Croatia, Italy, Malta, Netherlands, Austria, Poland, Portugal
Less than 4%	Germany, Estonia, Greece, France, Latvia, Lithuania, Hungary, Romania, Slovenia, Slovakia, Finland, Sweden
Section L (Real estate activities)	
12%-16%	Greece, France, Italy, Latvia, Portugal, Finland, Great Britain
8%-12%	Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Spain, Croatia, Cyprus, Lithuania, Luxembourg, Hungary, Austria, Romania, Slovenia, Slovakia, Sweden
4%-8%	Ireland, Malta, the Netherlands, Poland
Section M and N (Professional, scientific and technical activities as well as activities in the field of administration services and support activities)	
12%-16%	Belgium, France, Malta, the Netherlands, Great Britain
8%-12%	Denmark, Germany, Estonia, Ireland, Spain, Croatia, Italy, Cyprus, Luxembourg, Hungary, Austria, Poland, Romania, Slovenia, Slovakia, Finland, Sweden
Less than 8%	Bulgaria, Czech Republic, Greece, Latvia, Lithuania, Portugal
Section O, P, Q (Public administration and national defence; compulsory social security; education; health care and social assistance)	
Over 20%	Finland, Sweden, the Netherlands, Belgium, Denmark, Greece, France
16%-20%	Portugal, Cyprus, Spain, Germany, Luxembourg, Italy, Hungary, Malta, Austria, Great Britain
Less than 16%	Bulgaria, Czech Republic, Estonia, Ireland, Croatia, Latvia, Lithuania, Poland, Romania, Slovenia, Slovakia
Section R, S (Arts, entertainment and recreation; other service activities)	
Over 4%	Greece, Cyprus, Malta (15%), United Kingdom
2%-4%	Denmark, Germany, Belgium, Bulgaria, Czech Republic, Estonia, Spain, France, Croatia, Italy, Latvia, Lithuania, Hungary, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden
Less than 2%	Ireland, Luxembourg

Source: Own study based on Eurostat data

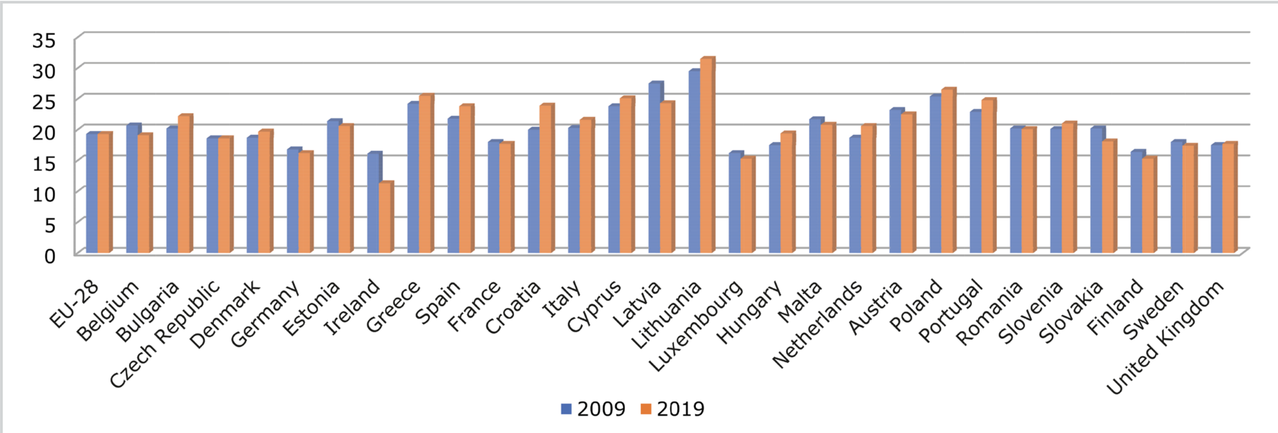

Figure 1:
Changes in the share of WDB in 2009-2019 in the sections:
trade, transport, accommodation and gastronomy
Source: Own study based on Eurostat data

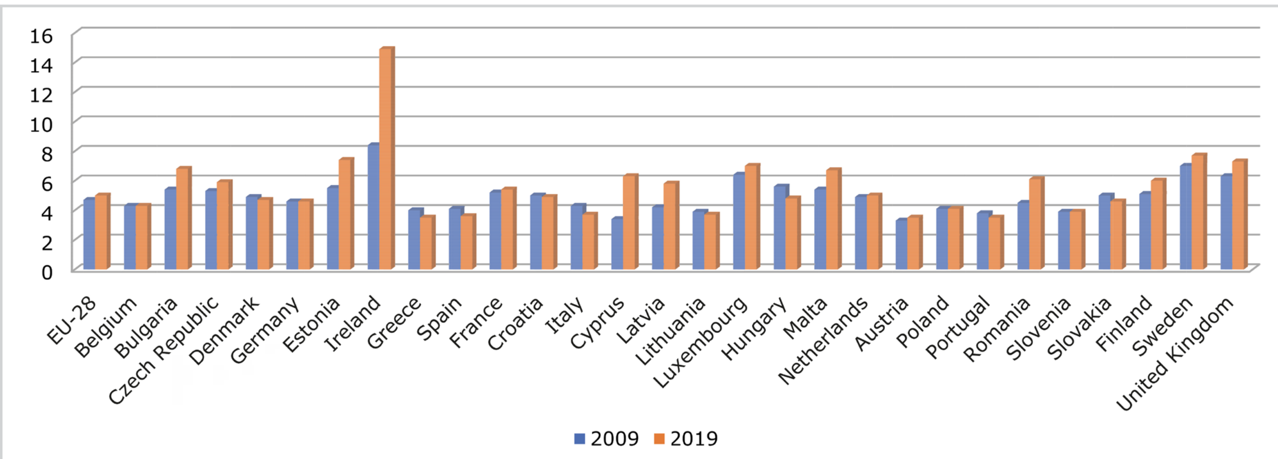

Figure 2:
Changes in the share of WDB in 2009-2019 in the section:
information and communication
Source: Own study based on Eurostat data

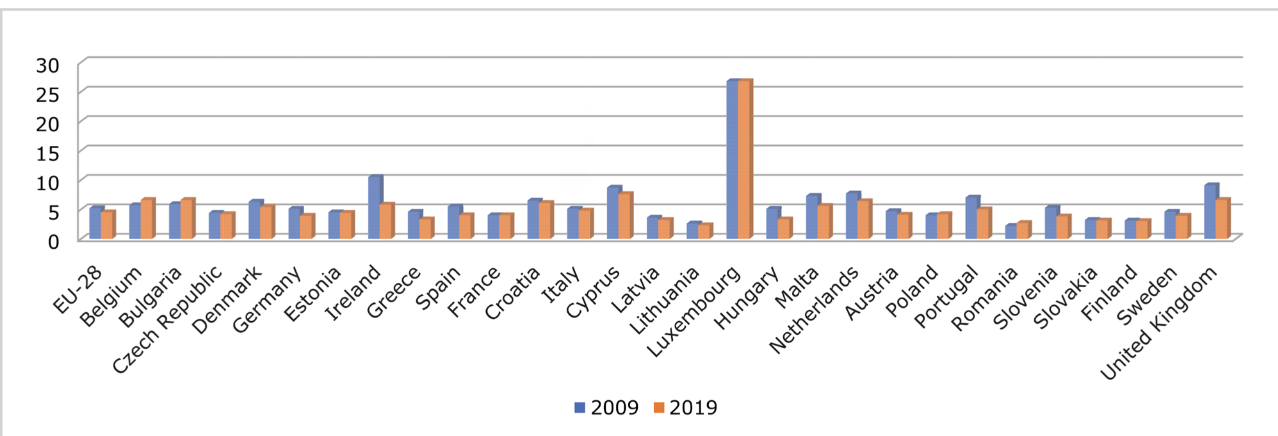

Figure 3:
Changes in the share of WDB in 2009-2019
in the financial and insurance activity section
Source: Own study based on Eurostat data

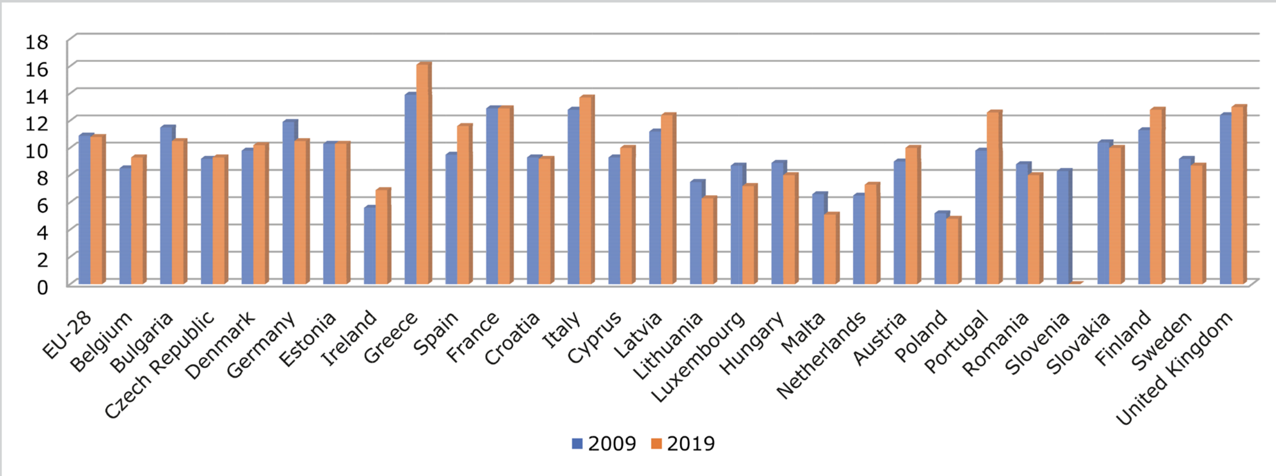

Figure 4:
Changes in the share of WDB in 2009-2019
in the real estate market service section
Source: Own study based on Eurostat data

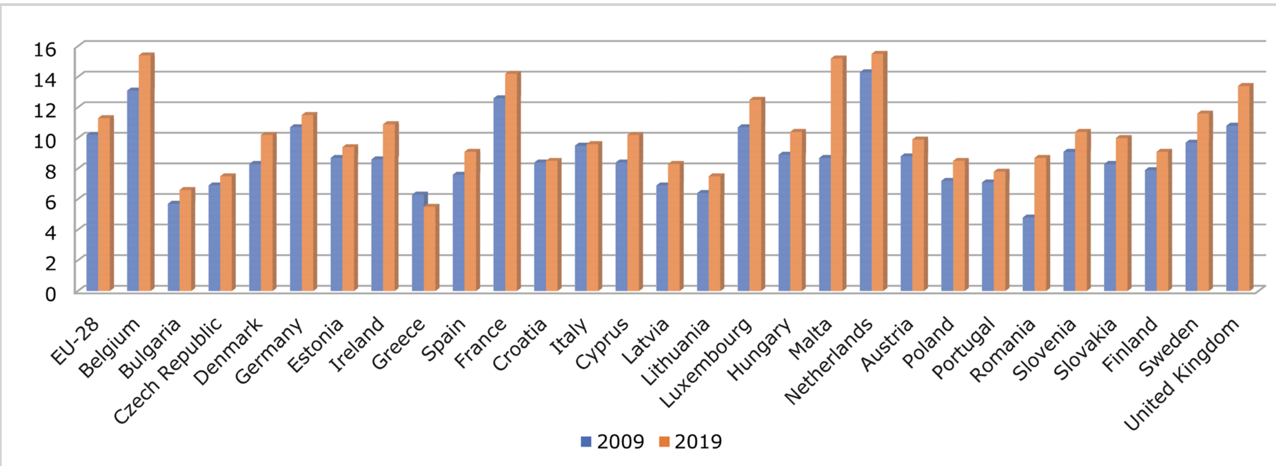

Figure 5:
Changes in the share of WDB in 2009-2019 in the section:
professional, scientific and technical activities as well as activities
in the field of administration services and support activities
Source: Own study based on Eurostat data

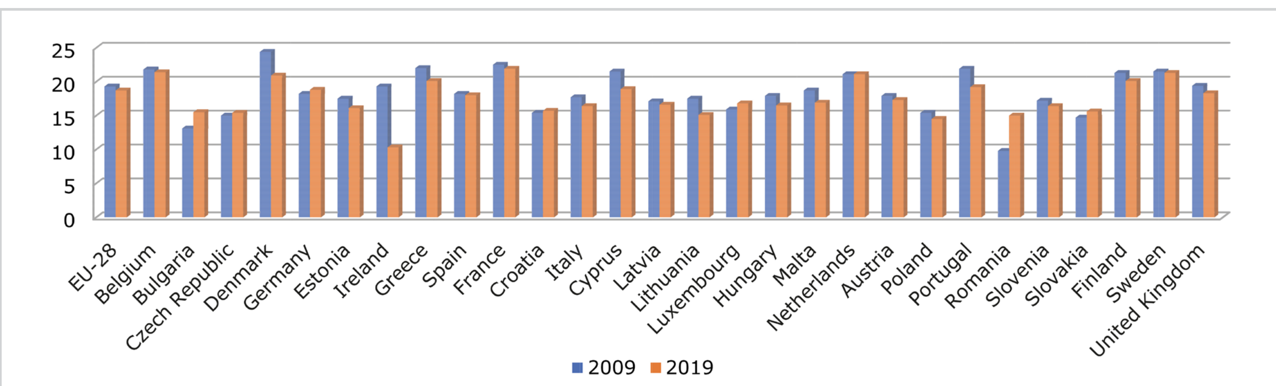

Figure 6:
Changes in the share of the WDB in 2009-2019
in the section: public administration and national defence;
compulsory social security; education; health care and social assistance
Source: Own study based on Eurostat data

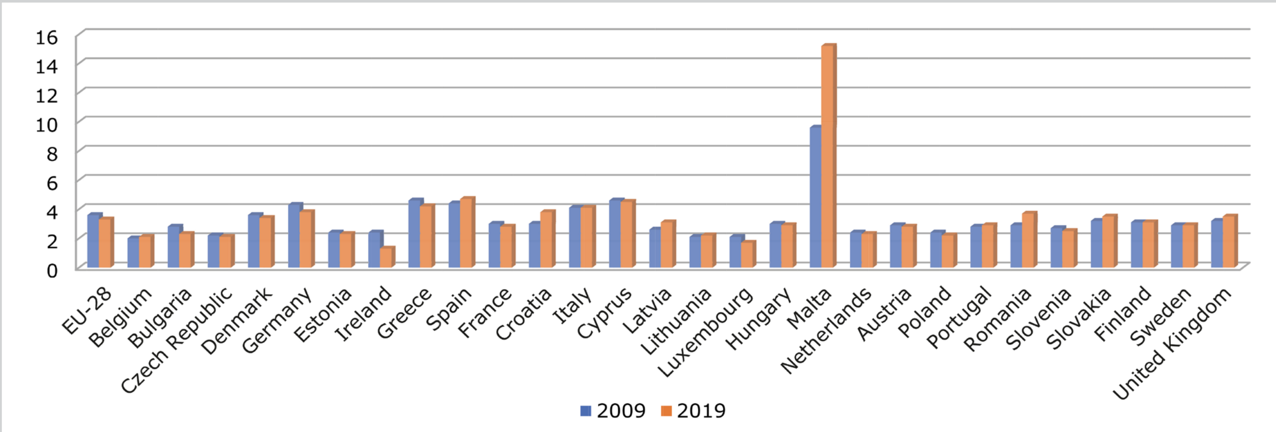

Figure 7:
Changes in the share of WDB in 2009-2019 in the real estate market service section
Source: Own study based on Eurostat data

Drapińska (2014, p. 87) as a result of her research, dividing the service sector into market and non-market services, has stated that in the structure of the gross value added of the service sector, market services are the most important. Analyzing the share of the European Union countries in gross value added in 2019 compared to 2009 in each section included in service activities in services included in the trade, transport, accommodation and catering group in 9 countries (Belgium, Estonia, Ireland, Greece, France, Malta, Slovakia, Finland, Sweden) a decrease in the share was observed. The highest decline occurred in Ireland, from 16.1% in 2009 to 11.3% in 2019. There was an increase in the share in 11 countries (Bulgaria, Denmark, Spain, Croatia, Italy, Cyprus, Lithuania, Luxembourg, the Netherlands, Poland, Portugal), with the highest increase by 4% in Lithuania. In other countries, the situation has not changed. In the services section of information and communication, in almost each of the analyzed countries, in 2019, as compared to 2009, there was an increase in the share of gross value added in the total value generated by the service sector. The highest increase - by 6.5% - was observed in Ireland and in Sweden - by 0.9%. The opposite was true for financial and insurance services, where a decline in gross value added was observed in most countries. A slight increase in gross value added occurred in Cyprus by 1.3%. No significant changes were observed in the activities related to real estate services. In the group of services defined as professional, scientific and technical activities as well as activities in the field of administration and support services in all countries except Greece, there was an increase in the gross value added. The highest increase in the share by 6.5% was reported in Malta. The increase in the share of gross value added in almost all countries was observed in the group of services, which included: public administration and national defence; compulsory social security; education; health care and social assistance. A slight differentiation was observed in the group of services related to culture, entertainment and recreation and services defined as other service activities.

According to the data of the Central Statistical Office, in 2009-2019, the total share of the service sector sections in Poland in generating gross value added was at a similar level, in 2009 it was 64.3% and in 2019 65.5%. Among the analyzed services, the dominant activity, whose share accounted for 27.0% of gross value added in the entire sector, was trade and repair of motor vehicles. Transport and storage were in second place with a share of 10.8%. Worth noting is also the 9.0% share of professional, scientific and technical activities. The activities with the lowest share in generating gross value added were: households with employees and producing products for their own needs (0.2%), activities related to culture, entertainment and recreation (1.1%) and accommodation and gastronomy (2.2%). The analysis of the data shows that despite the stable development of the service sector in the area of employment and gross value added, changes are taking place. The content of work and working conditions, qualifications and skills of employees are changing (according to Skórska, 2016). Comparing Poland with other European Union countries, a difference is visible both in terms of gross value added and employment. Exceeding the contractual limit of 50% share of services in employment in 1999 allows to state that Poland is considered one of the countries with a service structure of economy.

4. Conclusion

In recent years, an increase in the importance of the services sector has been noticed, which is reflected in the increase in the number of people working in services and an increase in the share of gross value added generated by this sector. In the European Union countries, both the share of the employed and the value added show a growing tendency but with different pace of change in different countries. In 2019 the service sector produced 72.9% of the gross value added, while in 2009 it was 72.2%. The study tried to focus on individual types of services, not services in general. The observed changes (increase, decrease) taking place in the structure of employment and gross value added indicate the directions of further development of the service sector.

The conducted research allows concluding that the share of individual sections in the creation of gross value added and the level of employment varies. Moreover, the analysis of the service sector allowed distinguishing sections of the economy with increasing or decreasing trends in changes in their share in total employment and the creation of gross value added in the service sector. It also indicated which sections have the greatest impact on the development of the service sector, and which have a small contribution and have not changed significantly over the years. In 2019, the sections: public administration, defence, education, health and social activity showed an increase in total value added by 0.6%, reaching the level of 18.7%. In 2009-2019 the share of professional, scientific, technical, administrative and support services has also increased, by 1.1%. An increase has also been noticed in the IT and communication services - by 0.3%. The cause for the development of the before-mentioned types of service activities could be the ongoing process of society aging, the changing structure of households, or the increase in the wealth of societies affecting the change of lifestyle and the need for new services.

The highest share of the services sector in generating gross value added was observed in Luxembourg and Cyprus, the lowest is in the Czech Republic, Romania and Slovakia. In Poland in 2019, compared to 2009, there was an increase in people working in services and an increase in the share in generating gross value added, but these values are below the average for the European Union countries. The level of development of the service sector is strongly and positively correlated with socio-economic development. In countries with a high level of socio-economic development, there is a greater share of knowledge-based services. The service sector will continue to undergo internal transformation, driven by changes across the economy and the changing needs of service users. Along with the growing wealth of societies, the share of services in employment will also increase.

Depending on the needs, new types of services are created, including those based on knowledge (sections M and J), and other so-called simple services are disappearing. It was noticed that both in terms of employment and gross value added, countries with a lower level of development are characterized by a greater share of commercial services, transport services and catering services. Based on own research as well as the analysis and observation of the service sector, it should be noted that the segment of services referred to as business services is beginning to separate.

The socio-economic situation around the world in 2020 was influenced by the restrictions implemented during the year to counter the COVID-19 pandemic, which, with varying degrees of intensity, affected the results in basic areas of activity (Roszko-Wójtowicz & Grzelak, 2020). According to the latest estimates of the International Monetary Fund, the global gross domestic product in 2020 decreased by 3.5% per annum (compared to an increase of 2.8% in 2019). In most countries, GDP was lower than a year ago. In Poland, gross value added was 2.9% lower than in 2019. In trade; repair of motor vehicles, gross value added decreased by 4.0%. In January 2021, the general economic climate indicator is still negative. Deterioration of the economic situation, compared to December 2020, is only reported by the managers of units from the financial and insurance activities section. Entities from the accommodation and catering section assess the economic situation the worst. Only companies from the information and communication section provide positive assessments of the economic situation.

Negative tendencies also appeared on the labour market. There was a crisis in many industries - primarily in the catering, hotel, transport, fitness and entertainment industries, which were unable to function normally for almost the entire year. However, there are industries that, despite the pandemic, managed to remain stable or recorded growth. These include: the IT industry and e-commerce services.

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