

Comparative Analysis of E-commerce Development in Sweden and Finland within Urbanization Contexts

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Abstract: The pandemic caused by COVID-19 created many challenges to the society. In order to protect the health of individuals, governments introduced many restrictions. One of the most common ones was social distancing. As a result, the consumption in physical stores was very limited and thus shifted into the e-commerce sector. This study aims to analyze the development of e-commerce sector in Finland in comparison to Sweden based on the available urbanization segmentation on Eurostat. The research method involves collection and analysis of data available at Eurostat. The results of the study suggest that due to the COVID-19 pandemic and the resulting government restrictions, there was a different development of the e-commerce sector in Finland than in Sweden. Finland recorded a greater increase in e-commerce turnover in suburb and rural areas whereas Sweden noted more significant increase in the e-commerce sector in individuals living in cities. Moreover, the outcome indicates that even after the most significant pandemic times has passed, the number of purchases performed via e-commerce platforms has remained at a higher level than during the pre-pandemic times. Hence that, there is an increasing tendency in the number of purchases performed via e-commerce platforms, which is the case for both investigated countries. Consequently, it could be assumed that due to the change in the customer purchases which were at first performed via online platforms due to the necessity of protection of health, created a new habit in customers who prefer to perform purchases via e-commerce platforms even in the present.

Keywords: E-commerce; globalization; economic crisis; COVID-19 pandemic

JEL Classification: L86, R11, R58, O33

1 Introduction

The early twenty-first century witnessed rapid technological advances that drove economic growth in the second decade. However, this growth faced a major challenge with the emergence of the COVID-19 pandemic caused by the SARS-CoV-2 virus. The onset of this global health crisis brought unprecedented turbulence to the world market, affecting all economic actors in a way rarely seen in modern history. The pandemic caused significant disruption to health systems around the world and generated widespread panic and uncertainty. These conditions led to a disruption of traditional market mechanisms, gradually leading to what is now known as the pandemic economic crisis. The pandemic economic crisis differs from previous economic downturns in its unprecedented scale and global impact. Although similar crises have occurred in the past, the current crisis has unique characteristics. Factors that previously supported strong economic growth, such as technological progress and a strong labour force, have come under strain. The pace of technological convergence has slowed, and the workforce is ageing, reducing its effectiveness in supporting growth. In addition, world trade has reached a saturation point, further complicating the economic situation (IMF, 2021). In the years leading up to the COVID-19 pandemic, there were already signs of economic strain, as underlying problems were often postponed rather than addressed. This environment of procrastination created a breeding ground for recession. As such, the current crisis is not only the culmination of existing problems, but also the manifestation of long-standing vulnerabilities within the global economic system (Kalamen et al. 2023).

E-commerce underwent a seismic shift before and after the COVID-19 pandemic. Even before the crisis, online retailing was on a steady upward trajectory, driven by changing consumer preferences and advances in digital technology.

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However, the pandemic acted as a catalyst, accelerating the adoption of e-commerce by several years in a matter of months. Following the introduction of lockouts and welfare measures, consumers turned to online shopping out of necessity, leading to a surge in demand for goods and services delivered directly to their homes. As a result, e-commerce not only became a lifeline for businesses struggling to survive the economic impact of the pandemic, but also fundamentally changed consumer behaviour, creating a new normal in which online shopping is an integral part of everyday life (Guthrie et al. 2021). Industry reports and consumer surveys show that the pandemic has accelerated a trend towards e-commerce that had been observed before the crisis (Kim, 2020). The fear of the pandemic has notably influenced consumer perceptions of the economic and environmental benefits of e-commerce platforms (Tran, 2021). Some authors predict that the digitalization of the marketplace and the habits learned during the pandemic may bring about structural changes to consumption as individuals maintain their modified behaviours once the pandemic ends (Kim, 2020; Sheth, 2020), such as those observed in China in 2002–2003 during the SARS pandemic (Clark, 2018). Even before the COVID-19 pandemic, e-commerce had been growing steadily as a proportion of total retail sales worldwide. In many developed countries, it was between 10% and 20%. During the pandemic, however, e-commerce growth accelerated significantly as lockouts and security concerns prompted consumers to shift their shopping habits online. In some regions, the share of e-commerce rose to more than 30% of total retail sales. These figures varied considerably from country to country, with more digitally advanced economies tending to have a higher share of e-commerce. During the peak of the coronavirus crisis (March–April 2020) when many countries worldwide introduced lockdown measures, e-commerce share in total retail sales saw proportions that were not seen before. In the United Kingdom, where an already mature e-commerce market exists, e-commerce share saw as high as 31.3 %, before stabilizing in the subsequent periods. In the most current period (as of January 31, 2021), United Kingdom, United States and Canada were the leading countries where e-commerce had a higher share as a proportion of total retail, at 24, 17, and 15 %, respectively (Chevalier, 2023).

2 Theoretical background

In the course of transition from the old economy to the new one, e-commerce has eliminated the problem of time and space which in return has lowered costs in production process. Thus, e-commerce has become a dynamic factor in the new economy. OECD (2001) defines e-commerce in two scopes sorted as broad and narrow ones. According to the broad definition, e-commerce is the purchase or sale of goods between the businesses, households, individuals, governments and other public and private organizations over computer networks. Narrow definition on the other hand is almost same as the broad definition of the exception that the instrument of trade is limited with the internet. Totonchi (2012) argues that e-commerce is production, advertisement, sale and distribution of goods and services on open network environment (internet) or via closed network environment (intranet). In frame of the definitions, e-commerce is the trade of physical goods over open and closed networks.

In the existing literature, studies focusing on macro-level determinants of e-commerce adoption are few, most of this research mainly emphasizes individual and organizational environments (Delone & Mclean, 2004; Grandon et al., 2011; Chiu et al., 2014). Although individual and firm level factors are important, they do not explain significant differences in e-commerce adoption among countries. Moreover, because of sampling constraints, the generalization of the results reported in the existing research that examine macro-level determinants of e-commerce adoption is rather limited. Particularly under the circumstances caused by COVID-19 pandemic and the pressure of increasingly advancing technologies, social media and online platforms have been created to saturate the customer needs and on the other hand companies take an advantage of the opportunities online space provides (Pollák, Markovič, 2021).

The advent of the internet has challenged traditional notions of urbanization, leading to a shift towards a new trajectory where the urbanization of the population diverges from the urbanization of the land. This contradiction, manifested in the significant expansion of built-up urban areas compared to the growth of China's urban population since 2000, has highlighted inefficiencies and social problems such as unaffordable housing. However, the development of e-commerce has enabled a new approach to urbanization, enabling the two-way movement of goods between rural and urban areas and the provision of basic services at residents' doorsteps. This decentralized model challenges the traditional concentration of population and industry in large cities and offers opportunities for small towns and rural areas to develop into urbanized regions under the decentralization model (Sheng et al., 2014).

The traditional pattern of urbanization, characterized by peasants migrating to cities in search of work during industrialization, has left rural areas struggling with social problems such as abandoned farmland and deserted populations. However, scholars recognize that in populous countries such as China, India and Mexico rural areas will continue to retain significant populations due to factors such as agricultural, land ownership and food security concerns

(Li X, 2014). The influx of rural people into cities not only depletes rural resources and cultural heritage, but also weakens agricultural base. In response, a new approach to urbanization is emerging, called in situ urbanization, which is driven by e-commerce and focuses on districts as spatial units. This approach seeks to strike a balance between agricultural modernization and the development of modern services, emphasizing the importance of stable agricultural development as a cornerstone of rural prosperity. Rural areas adopt different strategies, such as strengthening agricultural modernization, combining the primary and tertiary sectors or striking a balance between different sectors (Chu X and Li H, 2013). The main objective is to ensure sustainable rural development while harnessing the innovative potential of e-business to create new models of rural prosperity. Although there has been a growing scholarly interest in e-commerce development management. Recently, some Chinese studies have paid attention to the influence of e-commerce on rural development and rural life. The rapid development of e-commerce has led to the booming of Taobao villages, the number of which dramatically increased from 3 in 2009 to more than 2100 in 2017 (Lin, 2019). Taobao village is a cluster of rural e-tailers, where at least 10% of rural households engage in e-commerce or at least 100 online shops are open in the village.

Despite the primary attention of researchers in the field of drivers of e-commerce adoption to urbanization differentiation, there is a number of global country-level studies that can be identified in the literature (Ahluwalia, 2020). They rely on aggregate indicators representing the socio-economic characteristics of different countries and often focus on a study of the role of cross-cultural differences, which, for example, are considered using the approaches similar to Hofstede (Hallikainen, 2019). Another important aspect to e-commerce adoption is efficient use of resources based on more effective and transparent communication processes. An interactive communication between the parties can also bring a benefit of providing vital information to customer on one hand and to the enterprise on the other which stimulates information flow needed for effective business especially in the times when economy is impacted by shows such as COVID-19 pandemic (Saruç et al., 2013).

3 Methods

This study aims to analyze the change in the shopping behavior of individuals living in Sweden and Finland since breakout of the COVID-19 pandemic until the post pandemic time by the use of Eurostat data. Eurostat is the statistical office of the European Union which has a mission to provide high-quality statistics and data on Europe. Furthermore, it produces European statistics in partnership with National Statistical Institutes and other national authorities in the EU Member States.

For the purposes of this paper, the data used for performing an analysis of the shopping behavior are taken from the digital economy and society dataset with a further specification to information and communication technologies (ICT) usage in households and by individuals. The data are gathered by the EU survey on the use of Information and Communication Technologies in households and by individuals conducted on a yearly basis by the National Statistical Institutes and are based on Eurostat's annual model questionnaire. This questionnaire is updated each year to reflect the evolving situation of ITC. It collects data on the access to ICT, on the use of the internet, e-government, e-commerce, internet of things and green ICT. The statistical units of the survey are individuals aged between 16 and 74.

This article presents a selection of the dataset regarding the online purchases with the specification of the information society indicator specific to the types of individuals based on the urbanization type. For the purposes of this paper, the below reports have been selected to demonstrate the main e-commerce shift in the customer behavior:

- Internet purchases by individuals (until 2019),
- Internet purchases by individuals (2020 onwards).

In order to be able to understand the evolving trend since the spread of COVID-19 in Europe, it is crucial to use both reports. For the purposes of the paper, firstly it is important to understand if the two reports are comparable and if there are any significant changes which may impact the study. To perform a precise analysis of the dataset the team of scholars has firstly analyzed the set of specifications used in both reports available at Eurostat. Having said that, below we present the main criteria used:

1. Geopolitical entity is specified to the countries of Sweden and Finland;
2. The time period is specified from the year 2017 until 2023;
3. Individual type is specified to individuals living in cities, individuals living in towns and suburbs, and individuals living in rural areas;

4. Unit of measure is specified to percentage of individuals;
5. Information society indicator is specified to last online purchases in 12 months.

Since these set of criteria is identical in both reports, it enables the studied dataset to be comparable and to analyze the evolving situation in Sweden and Finland since pre-pandemic time until the present.

4 Research results

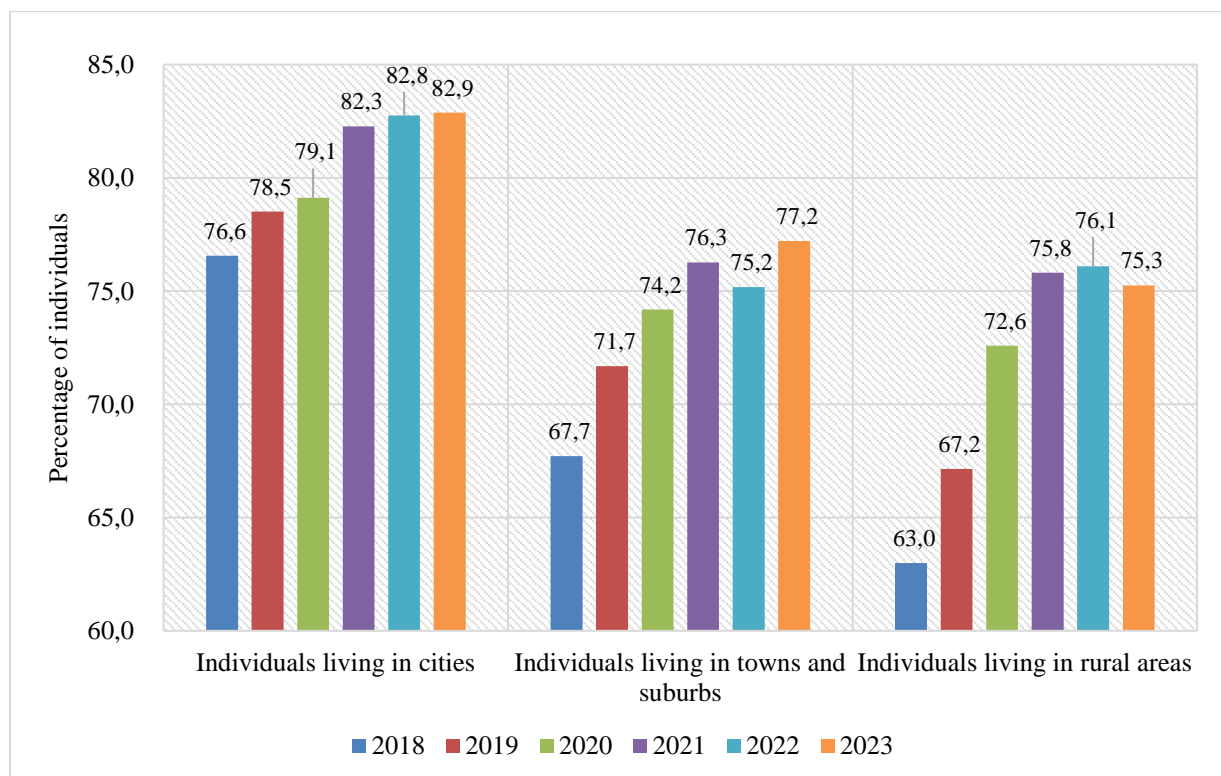
Since the outbreak of COVID-19, there have been several government restrictions that needed to be enforced. During the epidemic, many countries including Finland and Sweden adopted a policy of blocking and limiting social contact, social distancing was a common government restriction with the main goal of protecting individuals and limiting the spread of the pandemic. This greatly affected the possibilities to shop in physical stores on one hand and strengthened the possibility to shop online on the other. Thus, many e-commerce platforms were influenced by the pandemic situation and subsequently this had an impact on customer behavior. Due to that, one could assume that the nature of business has changed to some extent. The main factors that have undergone a significant transformation due to the COVID-19 pandemic is the number of customers using e-commerce platforms.

Based on the above and on the basis of data available at Eurostat, the shift in purchasing behavior can be demonstrated in Figure 1 below. The given data are narrowed down to the geographical area of Finland. In order to understand the development of the situation before, during and after the pandemic from a time series perspective, the years from 2017 to 2023 were selected for the purposes of this study. The statistical units of the survey are individuals aged 16 to 74 years, further distributed based on the urbanization of society, and thus the distribution of the population into:

- Individuals living in cities,
- Individuals living in cities and suburbs and,
- Individuals living in rural areas.

Based on these criteria, the collected dataset on internet purchases by individuals and/or households of individuals living in Finland are presented in Figure 1 below.

Figure 1 Online purchases of Individuals living in Finland based on Urbanization of the Society



Source: Authors based on Eurostat Data

Figure 1 presents the percentage of individuals that performed a purchase of goods and services via online e-commerce platform between the years 2018 to 2023 in the territory of Finland. For the purposes of clear data visualization, the x-axis shows the development in time from 2018 to 2023 which is split as per urbanization differentiation. The y-axis shows the percentage of individuals who purchased good and services online. For a better visualization, the y-axis is set from a minimum of 60 percent to maximum of 80 percent. Moreover, the data in Figure 1 express the percentage of individuals in absolute percentage points and thus present the absolute value according to the database available at Eurostat.

As can be seen from Figure 1, an increasing trend is noted in the number of consumers who purchased goods or service online across all the urbanization categories specified by Eurostat. The time period of the COVID-19 pandemic spread could be marked around the first quarter of the year 2020 in Finland as the first cases started to be noted around this time period. Thus a change in the way business activities were performed has been influenced in regards to the newly introduced government restrictions such as social distancing. Due to that, one could assume that there has been a change in the purchasing behavior of customers which is presented by a shift in the purchase of goods and services from brick-and-mortar stores towards e-commerce platforms or online shopping.

Figure 1 demonstrates that in terms of infrastructure, whether the consumer lives in an urbanized city, in a suburban village or in rural areas, the COVID-19 pandemic had a similar impact on the consumer behavior of all residents. This simply means that the government restriction and social distancing was applicable everywhere in the same manner which caused a shift in the way business activities were performed, more and more towards the online e-commerce platforms. Regarding a group of individuals living in cities the biggest increase of 3.1 percentage points can be seen between the years 2020 and 2021. In the other years the increase or decrease was oscillating around 1 percentage point, apart from the increase between the years 2018 and 2019 where an increase of 2 percentage points was noted. A group of individuals living in towns and suburbs noted a consecutive increase in terms of absolute percentage points, between the years 2018 and 2019 by 4 percentage points as well as 2019 and 2020 by 2.5 percentage points and even followed by further increase of 2.1 percentage points between 2020 and 2021. Similarly, a group of individuals living in rural areas noted an increase in online purchases between the years 2018 and 2019 by 4.2 percentage points followed by further increase of 5.4 percentage points between the year 2019 and 2020 in absolute percentage points and an additional increase of 3.2 percentage points between the years 2020 and 2021. As a result, it can be assumed that a more significant increase in online purchases is seen in the group of individuals living in towns and suburbs and also in rural areas compared to individuals living in towns. Furthermore, since 2019 it can be seen that a crucial increase occurred in the group of individuals living outside of cities, in case of individuals living in towns and suburbs in the absolute amount of 2.5 percentage points and in case of individuals living in rural areas in the absolute amount of 5.4 percentage points. If we compare this to the individuals living in cities, there is also an increase noted nevertheless in the absolute value of 0.6 percentage points. As a result, one could assume that a more significant increase is noted in the population living outside of cities.

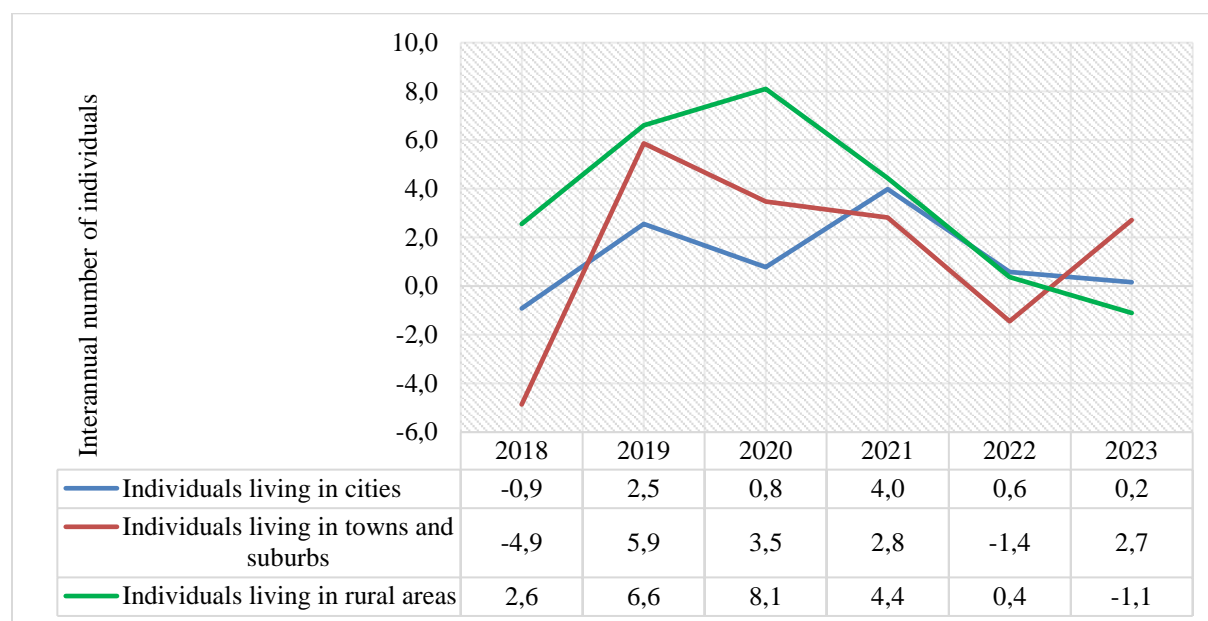
Moreover, even after the pandemic waves have passed, in 2022 and 2023 we can see that the percentage of individuals who make online purchases has remained above the level of pre-pandemic times, regardless of the customer environment in which they live. Due to that, we could assume that since COVID-19 pandemic began to be spread in the geographical area of Finland there is an increase in purchases performed online and thus one could assume a change in the customer behavior.

In order to be able to better interpret the evolution of the change between the years, a further calculation of the interannual percentage change has been calculated. Since we dispose with the data of individuals who ordered goods or services on a yearly basis, we can calculate the percentage change between the given years. The result would be expressed as percentage and demonstrates the amount of change happening between the two selected years and is calculated in the following way:

$$[(\text{Number in later time} / \text{number in earlier time}) - 1] * 100$$

Based on the above, the results of the interannual percentage change calculation can be seen on the Figure 2 below.

Figure 2 Year-on-year percentage change in Internet Purchases by Individuals of Finland according to Urbanization



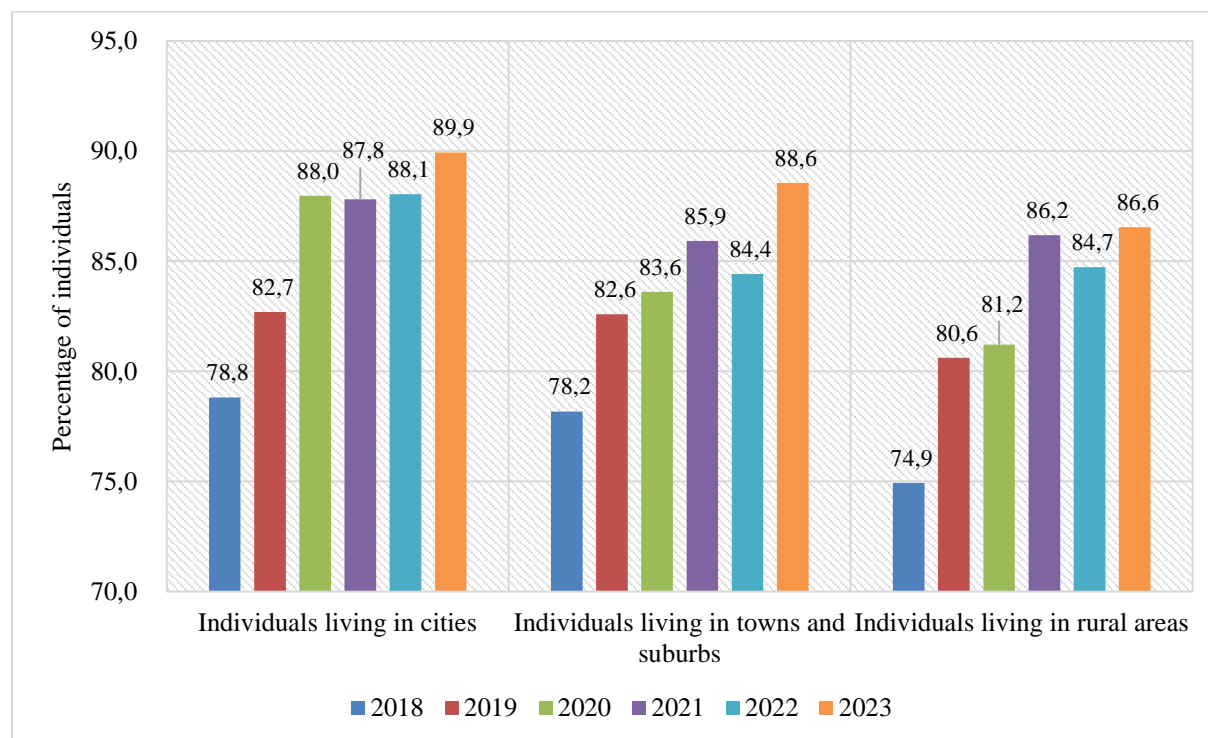
Source: Authors based on Eurostat Data

In the context of the earlier presented data on Figure 1, which expressed absolute percentage values, the data on Figure 2 shows the percentage change between two time periods. In this case, the percentage change is used to compare statistical data during the years 2018 to 2023 and expresses how much change has occurred between individual years.

In relation to the previous data, we can see that the biggest interannual percentage increase differs based on the group of individuals according to the urbanization differentiation. As suggested based on the earlier data, individuals living in cities note the most significant interannual increase between the year 2020 and 2021, an increase of 4.0 percentage points. In comparison to that, we can see that in terms of individuals living in towns and suburbs the increase is higher and in the value of 5.9 percentage points between 2018 and 2019, followed by 3.5 percentage points between 2019 and 2020 and 2.8 percentage points between 2020 and 2021. Similarly, number of individuals living in rural areas recorded also a more significant increase than a group of individuals living in towns and that is 6.6 percentage points between the years 2018 and 2019, followed by further increase of 8.1 percentage points between 2019 and 2020 and an additional increase of 4.4 percentage points was recorded between the years 2020 and 2021. Due to that, it can be assumed that since the COVID-19 pandemic a more significant increase of the online purchases can be noted in population living in towns and suburbs or rural areas in comparison to individuals living in cities in the geographical area of Finland. In general, we can see that the trend is mainly positive which means that year over year there is more and more individuals who perform purchases online via the use of e-commerce platforms.

Further analysis of the data available on Eurostat is focusing on the geographical area of Sweden, other parameters remain unchanged. The statistical unit is individual aged 16 till 74 years and from time perspective the years from 2017 till 2023 are investigated. The evolution of the shopping behavior of individuals is presented on Figure 3 with the split based on the urbanization differentiation as presented earlier in the paper.

Figure 3 Online purchases of Individuals living in Sweden based on Urbanization of the Society



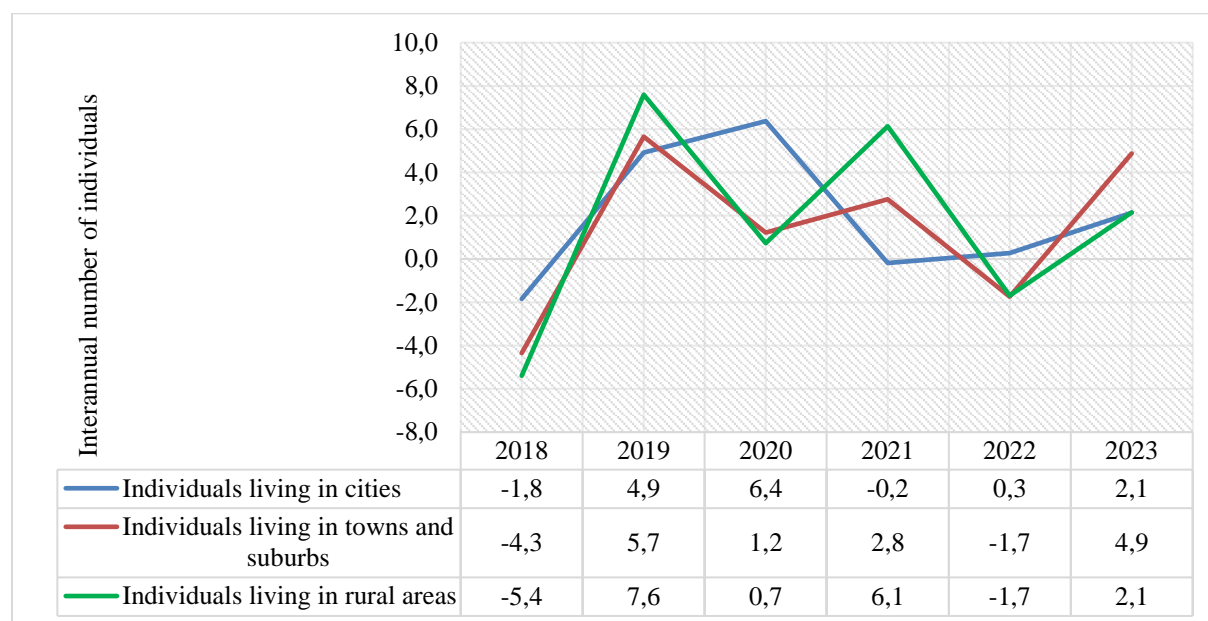
Source: Authors based on Eurostat Data

Figure 3 presents the percentage of individuals that performed a purchase of goods and services via online e-commerce platform between the years 2018 to 2023 in the territory of Sweden. For the purposes of clear data visualization, the x-axis shows the development in time from 2018 to 2023 which is split as per urbanization differentiation. The y-axis shows the percentage of individuals who purchased good and services online. For a better visualization, the y-axis is set from a minimum of 70 percent to maximum of 95 percent. Moreover, the data in Figure 3 express the percentage of individuals in absolute percentage points and thus present the absolute value according to the database available at Eurostat.

Having seen the absolute percentage point data displayed on Figure 3, we can observe that since COVID-19 breakout, since 2019, a higher percentage point increase is noted in the group of individuals living in cities in comparison to the population living in towns and suburbs or rural areas. The number of individuals who performed online purchases and are living in cities has risen by 5.3 percentage points between the years 2019 and 2020. Afterwards, the percentage remained around 88 percentage points with very little changes until the increase of 1.9 percentage points recorded between the years 2022 and 2023. The evolution of online purchases in Sweden was not the same in the group of individuals living in towns and suburbs or in rural areas. The recorded increase between the years 2019 and 2020 was within 1.0 percentage points in the individuals living outside of cities. In terms of individuals living in towns and suburbs there was an increase however, only in the value of 1.0 percentage point and in case of the group of individuals livings in rural areas the increase is in the value of 0.6 percentage points. Consequently, the population living in towns and suburbs recorded a more significant increase later on, between the years 2020 and 2021, in the value of 2.3 percentage points. Similarly, regarding the individuals living in the rural areas, a more significant increase can be seen between the years 2020 and 2021 in the amount of 5.0 percentage points.

In order to be able to better interpret the evolution of the change in Sweden between the years, a further calculation of the interannual percentage change has been calculated and the results are presented on Figure 4.

Figure 4 Year-on-year percentage change in Internet Purchases by Individuals of Sweden according to Urbanization



Source: Authors based on Eurostat Data

In the context of the earlier presented data on Figure 3, which expressed absolute percentage values, the data on Figure 4 shows the percentage change between two time periods. The percentage change is used to compare statistical data during the years 2018 to 2023 and expresses how much change has occurred between individual years.

Figure 4 demonstrates the interannual percentage change evolution of the online purchases in Sweden made by individuals according to urbanization differentiation available at Eurostat. The year-on-year percentage change since the COVID-19 pandemic breakout or between the years 2019 and 2020 is positive in all the groups of individuals. However, a more significant increase can be seen in the group of individuals living in cities in the value of 6.4 percentage points. As can be seen, the group of individuals living in towns and suburbs recorded 1.2 percentage point increase and the group of individuals living in rural areas registered 0.7 percentage point increase. Due to that, it can be assumed that a more significant increase in the online purchases was noted in the group of individuals living in cities between the years 2019 and 2020. In case we would proceed to the next years interannual comparison, the situation is reversed and the group of individuals living in cities noted a decrease of 0.2 percentage points. However, the population living outside of cities noted an increase and even more significant than in the previous year's interannual comparison. In terms of individuals living in towns and suburbs, the increase between the years 2020 and 2021 is 2.8 percentage points and in case of individuals living in rural areas the increase is 6.1 percentage points. As a result, it can be assumed that the population living in the cities in Sweden had a more significant increase in the online purchases between the years 2019 and 2020 and in comparison, the number of online purchases performed by people living outside of cities had more significant increase during the years 2020 and 2021.

5 Conclusions

To summarize, in general it can be assumed that COVID-19 had an impact on the number of purchases performed via e-commerce platforms in Sweden as well as Finland. Based on the available data it can be interpreted that the number of online purchases has increased in both countries and across all the available types of urbanization. In case we would like to compare the latest available data at Eurostat, meaning the data from 2023 with the pre pandemic time in the year 2019, we can see that in terms of absolute percentage points there is an increasing trend in both countries, however with slightly different evolution based on urbanization differentiation available at Eurostat. In case of the population living in Finland and in cities, we can see that the increase between the years 2019 and 2020 was not so significant and a more significant increase in the online purchases occurred year after, between the years 2020 and 2021. Afterwards we do not record any essential changes, the number of purchases remained roughly stable with a total increase of 4.4 percentage points between the years 2019 and 2023 in absolute terms. In case of individuals living in Finland in towns and suburbs, the evolution was slightly different as apart from a significant increase between the years 2019 and 2020 of 2.5 percentage points, there was another increase of 2.1 percentage points which followed a year after. In total, the percentage of individuals who

performed online purchases between the years 2019 and 2023 has risen by 5.5 percentage points. In case of individuals living in Finland in rural areas even higher increase is recorded, between the years 2019 and 2020 an increase of 5.4 percentage points followed by 3.2 points between the years 2020 and 2021. In total, a group of individuals living in rural areas recorded an increase of 8.1 percentage points which can be assumed to be the most significant in Finland.

In case of the population living in Sweden, we have seen both, increase and also decrease in the number of purchases performed online. However, the population of Sweden living in cities recorded a more significant increase between the years 2019 and 2020, an increase of 5.3 percentage points which remained mainly stable for the following years. In total Sweden noted an increase of 7.2 percentage points between the years 2019 and 2023 which in comparison to Finland can be seen as considerable. In case of population of Sweden living in towns and suburbs, the increase between the years 2019 and 2020 was not as significant as between the years 2020 and 2021, where an increase of 2.3 percentage points was noted. In terms of comparison of pre-pandemic times with present, the group of individuals living in towns and suburbs recorded in absolute terms an increase of 6.0 percentage points which can be seen as having less affect in comparison to the group of individuals living in cities. To finalize, the population of Sweden living in rural areas shows similar trend as those living in towns and suburbs, with more significant increase in online purchases between the years 2020 and 2021, an increase of 5.0 percentage points. In total, the online purchases have increased by 5.9 percentage points.

As a result, it can be assumed that the COVID-19 pandemic had slightly different evolution of the trend of online purchases in Finland and in Sweden. The population of Finland demonstrates a more significant increase in the online purchases in in the population living in towns and suburbs and rural areas whereas the population of Sweden shows a more significant increase in the population living in cities. Additionally, in terms of individuals living in cities, the population of Finland shows a greater increase between the years 2020 and 2021 whereas the population of Sweden sees a greater increase in online purchases between the years 2019 and 2020. In the studied period of time, the trend of online purchases in general could be assumed to have an increasing tendency due to the fact that the number of internet purchases remained above the level of pre pandemic times in both countries.

In terms of e-commerce sector, these implications can be crucial for successful e-commerce strategy implementation. Factors such as delivery time, delivery locations, potential delivery costs etc. need to be evaluated for different countries within the different conditions described above. Regarding the e-commerce platforms or businesses operating in e-commerce sector, the business strategy needs to take into account the market potential to be able to create an adequate and realistic business plan. This study serves as a base for the business decisions operating in e-commerce sector in Finland and Sweden. Based on the earlier described analysis, the business strategy of individual company can be developed taking into account the market potential. Having this knowledge, the business plan is able to estimate realistic outcome in terms of sales or turnover based on the demand for online purchases.

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