

THE ROLE OF LOCAL PRODUCTION SYSTEMS IN THE ESTABLISHMENT OF SUSTAINABLE CONSUMER ATTITUDE¹

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Abstract

The present study elaborates on the importance of material flows in the context of local and global production systems. The theoretical part describes how population growth induced the need for global production and how it contributed to further welfare disparities. The research focuses on the socio-economic processes of globalization with a special consideration on resources. It states that business processes have grown over the importance of territorial affairs in the past 100-150 years. Movements requiring war conflicts in previous times are currently conducted through international trade relations. The spread of empires has been replaced by global corporate expansion. The paper reviews essential literature concerning this hypothesis and argues for the transparency of resource utilization throughout the phenomenon. The results stand for the introduction of border adjustment taxes based on accurate resource valuation. The preference of local markets does not only strengthen local economies but comes significant regarding sustainable resource management

Keywords: *local markets, production systems, national resource balance, international trade*

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Introduction

The current paper is the second stage of an extended research. It belongs to a broad work programme, which aims at analysing good governance through public service development. This and the previous article both contribute to the environmental pillar of the initiative. The first analysis examined the tendencies of humanity's resource use and people's functional dependence on production systems. This study elaborates on the resource usage of these production systems and focuses on the way they acquire them. It states that national borders are not relevant anymore in case of resource utilization. Resources have always been an important motive behind human actions and they have driven societies into wars. By the spread of globalization, territorial conflicts (e.g. colonization) have become insignificant in order to harness other nations' resources. Empires of the past have fallen and multinational corporates have risen on their ashes. The colonists of current times are not empires anymore but companies conducting international trade. Unlike the former practice, these organizations are not opposed but rather welcome to send their subsidiaries to certain countries. Many nations gladly host multinational corporates since they consider them as notable investors and contributors to economic growth. The aim of this paper is to prove that this activity comes favourable only due to lack of resource value consideration. For starting an argument on the topic, the next chapter is going to introduce essential literature. It describes how population growth induced the need for global production systems and how they contributed to further welfare disparities. The

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research chapter is going to introduce a more explicit scientific background on how social scientists and economists have already noticed the disappearance of borders and the major role of multinational corporates. Eventually, recommendations will be presented of how economic incentives could prevent unfair international trade and steer consumers towards a sustainable attitude.

In the debate on economy's harmful environmental effects, the calculation of ecological footprint plays an important role. It shows the amount of resources consumed to maintain human activity (Wackernagel – Rees, 1996). Experts developed resource-specific indexes as footprint alternates to measure effects on single resources. These are carbon, water and land footprint. The first one calculates the amount of greenhouse gases emitted through the actions of certain individuals, events, products or companies (Wright et al., 2011). The other two indicate the quantity of water and land, which are used in relation with the same activities (Hoekstra – Mekonnen, 2012; Weinzettel, 2013). They all contribute to the final value of ecological footprint. Their main purpose is to evaluate environmental impacts. These methods come useful for companies' CSR programmes to show their consciousness (Herva et al., 2008; Lee – Cheong, 2011; Lambooy, 2011). Nevertheless, they could also be drivers for environmental regulations. The idea of taxes based on carbon footprint offers to charge producers for their greenhouse gas (GHG) emissions (Poterba, 1991; Elliott – Fullerton, 2014). A more market-based solution is the concept of international carbon markets where emission rights (or allowed carbon footprint) are given to stakeholders. These are called carbon credits and they can be traded within market circumstances. The approaches come from the opposite directions. Carbon taxes tell companies to pay for pollution and carbon credits offer the opportunity to be paid if they decrease their emissions (Thaler – Sunstein, 2009). There is discussion about the employment of these methods, unfortunately none of them seem to function though. The economics trends of the past decade, corporate lobby have negatively influenced carbon markets and the introduction of carbon taxes (Gilbertson – Reyes, 2009; Ervine, 2014). They would both increase product prices and decrease their competitiveness. Everyone has the right to decide whether or not it is fair to interfere in business with environmental policy. This study only offers a perspective to this debate.

Theoretical background

On growth and resources

Since Malthus (1798), the overall recognition of humanity's wasteful behaviour is that the enormous resource exploitation is the result of the rapidly growing population (Toth – Szigeti, 2016). This is partly true but the utter truth lies in a more multidimensional perspective. The present paper tends to absolve people from this responsibility. Population growth – nowadays mostly in middle- and low-income nations – surely contributes to the increasing ecological footprint of mankind. In case of high-income countries, the environmental impact could be even worse due to per capita consumption rates (Galli et al., 2012). Furthermore, the question arises: “why are we so many?” The answer is that the mass growth has been also triggered. Many essential innovations of the past few centuries have aimed at utilizing more and more resources, which allowed populace to escalate. Instead of analysing the correlation between the size of societies and the magnitude of their ecological footprint, one shall admit that this relationship is rather similar to a vicious cycle. People harness greater extent of resources because they are so many. They have come to this point because technologies enabled them to exploit the necessary resources (Lee, 2011). Therefore, it would be more important to interfere into this cycle. Human accretion has always been a sensitive topic. It is easy to take only economic aspects into consideration and advise limits to this growth. This is what Dennis L. Meadows

(1942-) and his co-workers have literally done in their well-known book, “The Limits to Growth” (Meadows et al., 1972). Only a few years later, Herman Daly (1938-) proposed a whole macroeconomic concept to this idea. According to his notion, policy makers are responsible to set birth control systems based on the available resources. His argument relied on the “Stationary states” economic theory where defined stocks of capitals and population belong to certain development stages. Daly has elaborated on an economic system where the amount of these aspects is centrally limited to a constant phase (Daly, 1977). There were other economists going even further than a simple limitation of growth. Nicholas Georgescu-Roegen (1906-1994) has argued that a steady-state economy is as fated to extinction as a growing one as long as it relies on finite environment. Therefore, he has offered a reverse direction and created the term of “Degrowth” (Georgescu-Roegen, 1975). Looking at the dates, one must acknowledge that the 1970’s were the decade of realizing the harmful effects of uncontrolled growth.

Later, theories have come up opposing these ideas. The most popular economist standing for further population growth was Julian Simon (1932-1998). In his 1981 book, “The Ultimate Resource” he argued that the limitation of populace would be equivalent with the restriction of knowledge. There might be negative effects of mass amount of people but the more we are, there is more of a chance innovation would occur. Novel ideas would be able to solve the problem of resource scarcity. His theory was meant to be worked on a long term (Simon, 1981). His argument did not only work later, but it was true long before he had come up with it. The previous contribution of this research already introduced an individual interpretation on the appearance of innovation. That paper stated that the most important inventions have always occurred at the time of resource shortages. New technologies were able to increase resource productivity or to utilize other resources. The problem – and this is what Simon did not consider – was that the invented novelties did not truly deliver their original purpose. Enhanced resource efficiency has sometimes resulted in more intense exploitation and the usage of untapped resources was controversial. Even though they enabled people to harness other type of resources, these were always finite. However, these aspects might not influence Simon’s theory in the future. The world of renewable energies is ahead of us, their employment is quite evident in the trends (Carley et al., 2017). Their mass utilization would prove Simon right regarding his long-term perspective. These innovations could resolve the resource scarcity problem of humanity. His argument remains controversial though. Georgescu-Roegen was cautious in his statement and highlighted the finite existence of environment, not only resources – or it depends what do people call resources. By this term, most people focus on materials spent on industrial and energy production. Nevertheless, there are far more important natural resources. The ecological footprint of agriculture is significant in depleting these resources. It even surpasses other sectors in some cases (Dong-dong, 2010; Pfister – Bayer, 2014). Even the zero-environmental impact of industry and energy branches would leave food safety and security as the bottleneck of population growth.

The local circle of social welfare

So far, this paper and its preceding research have focused on the relation of population and its resource use in terms of industrial and energy aspects. The social and economic paradigm shifts of the past two centuries influenced agricultural circumstances though (Schneider, 2012; Bakos, 2017). The growth of populace induced – and still induces – structural changes in the sector and competitive mass production forms started to spread (Boserup, 1965; Fedoroff et al., 2010). The process might have been similar to the one occurring in case of industry, but its effects were entirely different. People considered it obvious to acquire their goods from local markets in earlier times. Then foreign products have appeared in every nation’s markets and in some

cases, they were cheaper than domestic goods. Due to varying historical backgrounds, this phenomenon has differed in certain countries. Hungary for instance, has faced these changes after the regime change in the 1990's when it was already widespread in western countries (Fogarassy et al., 2017). Disparities occur due to distinct disposable incomes as well. Societies with a relatively lower wage level tend to be more price sensitive. Product prices prove to be a rather decisive factor in case of the Hungarian market (Szakály et al., 2009; Polreczki – Soós, 2012). Domestic products being more expensive than global ones might be the greatest contradiction of the current consumer society. However, the word “expensive” could appear a bit fallacious in this sense. The truth is that those goods usually come at their normal market price, which only seems high in comparison with the unreasonably low price of global products. Once again, this is a topic, which has a lot more to its elaboration and it is not the aim of the current study. The present research is concerned with the role of local markets and the related consumer behaviour. In this perspective, there is a single aspect to be added.

Not considering the grounds of price differences, the domestic products are sometimes endangered by foreign import. This paper states that focusing on making local production competitive by decreasing its prices (through subsidies etc.) should not be the top priority. It would be more important to enable society to afford these goods on their normal market value. For the description of this logic, the example of the UK's employment system could be used from the Victorian era. That time interval has started in the middle of the first industrial revolution and ended in the initial stages of the second. It has been considered as a prosperous age in British history. However, throughout the rapidly developing industrialism, there was also a dark side of it. It was also the time of employing explicit amount of child labour. In 1840, 20 percent of the younglings in London had attended schools. This number only increased to 50 percent by 1860. Their main motive to work was to give a helping hand to their families. In some cases, these children were the only family members with a salary. Their employment was quite favourable over adult workforce due to low wages (Humphries, 2013). At this point, one shall recognize the self-destructing circle of the system. Adult labour has been considered expensive in comparison of an alternative human resource, which should not have been employed in the first place. Highlighting the resemblance between this situation and modern social welfare might sound strange, but from a certain perspective they are just the two sides of the coin. In the first case, families have been forced to send their children to work because parents did not have a job. However, their unemployment had come from the economy-wide tendency of employing child labour, which decreased wages.

Nowadays, in some countries consumers prefer cheaper global products to local goods due to the lack of disposable income. What if the disposable income is influenced by this attitude? What happened if the money spent by consumers would end up within regional or national borders instead of global corporations? That very customer forced to choose a cheaper product might be in that situation because another person favoured a global option. If both – or in macro level most of the consumers – would prefer local or regional products, the internal flow of money could increase the disposable incomes. Even though, this chapter elaborated on agricultural production, the presented argumentation is valid for other sectors as well. In the research part, the study is going to focus on the other relevant contradictions of global and local production.

Research material and methodology

The focus of the research part will be on the socio-economic processes of globalization with a special consideration on resources. It introduces a brief historic insight on opening markets and the changes they induced in material flows. The examined statement is that business processes

have grown over the importance of territorial affairs in the past 100-150 years. It means that movements requiring war conflicts in previous times are currently conducted through international trade relations. The spread of empires has been replaced by global corporate expansion. The present chapter reviews essential literature concerning this hypothesis and argues for the transparency of resource utilization throughout the phenomenon.

The rule of the 21st century

According to Wellington Webb – former president of the U.S. Conference of Mayors: “The 19th century was a century of empires, the 20th century, a century of nation states. The 21st century will be a century of cities.”. In regional terms, this train of thoughts is valid. A 100 years before, there were 50 independent states on earth and 14 empires shared 137 colonies. Nowadays, there are 193 sovereign nations and many communities with certain forms of autonomy (Simai, 2015). The past century was the age of regional fragmentation. The trigger of this phenomenon was clearly the population growth presented in the initial phase of this paper. While 100 years ago, there were “only” 1 billion people on earth, the current amount is seven times bigger. This process has increased the level of nationalism as well. Former communities and ethnic groups have grown to be decent societies and claimed their territorial independence. Meanwhile, another movement has started too, it is known as urbanism (Wirth, 1938). Initially, it was induced by industrial revolution as people moved to cities for new workplaces. Later, urban areas have become significant source of services, which have been more appealing in comparison with rural territories (Magda et al., 2009). According to estimations, half of the world’s current population lives in cities. Predictions state that by 2050 66% of humanity could be living urban areas (UN, 2014). This intense level of urbanism is already labelled as the third stage of globalisation or in other words: Globalisation 3.0 (Friedman, 2005). The previous paper of this research already highlighted the connections between the parallel periods of industrialism and long Kondratiev cycles. As the phases of these processes show similar tendencies, one shall recognize how interconnected they are. However, one important aspect seems to be neglected, the situation of rural areas (Magda, 2010). Despite their low population density, they remain the main suppliers of agricultural products and sources of essential natural resources.

The creation of urban territories and their distances from rural regions have been a cause for extended material cycles (EMF, 2014). As there is a mutual dependence between these two regional forms, products and services flow within them there and back. The current study goes further than the expanding supply chain of these systems. It seeks answers for the controversial questions of international and intercontinental commerce. This is again a quite broad topic, which will be narrowed down to the main aspect of this research: the use of resources. As it was elaborated in the previous article, resources have been the motives behind most of the essential conflicts of human history. People started wars over their redistribution and colonized new territories for the possession of more. Throughout the breakdown of former empires, these circumstances seemed to disappear and our current world – at least in the western civilization – appears to be more democratic. The word “seem” is truly a correct one for this situation. If one digs deeper in the processes of global production systems, shall find that only methods have changed, motives remained the same. They still drive people to get a hold over the resources (Gedicks, 1993). Globalization has many aspects of which some result in benefits and some in disadvantages. International trade and the supply of global markets are considered advantageous in economic terms. It allows economies to grow over the limits of their national borders (Korten, 1995). Nevertheless, is it truly positive to rely on exports? There are different reasons behind countries importing foreign products. In some cases, they cannot produce them

in a cost-efficient way or they are simply not able to fabricate them at all. It comes from their lack of necessary resources.

A novel colonization of resources

Outsourcing production to developing countries has become a standard practice of western civilization. Literature calls it “carbon-leakage” when the trigger of this movement is the strict environmental regulation of the mother nation. Its name refers to the fact that GHG would be emitted anyway, it only appears in a different place (Babiker, 2005). It seems that target countries are more open to give up on an essential natural resource as clean air. The other – and even more significant – reason for relocation is cheap labour (Horvath et al., 2015). Either way, it is the underestimation of resources. In case of human resources, the mass availability enables countries like China or India to do so. Concerning natural resources the problem is their inaccurate valuation. Their degradation is not entirely considered (Kerpely et al., 2016). Partly, this is due to their opportunity cost, which is not fully known. By harnessing finite resources, one never knows how much they would worth in the future when there will be a lack of them. Therefore, people utilize as much as they can. Opportunity cost could also be applied to renewable resources that are overexploited and cannot regenerate (e.g. forests). Thus, outsourced production indicates a lot of room for elaboration. They are worth for western companies due to the easier access to resources. The previously described footprint indicators come useful to measure the environmental impact of this activity. They consider resource trade when a product is not consumed at its place of origin but it goes to export. This pattern highlights the most important aspect of international trade. Whenever a country exports, it does not only trade the product itself but all the resources which have been used for its manufacture (Murshed – Serino, 2011). It is a way to get a possession over a resource that would not be accessible in the first place.

The United States has the highest digital water footprint of the world in terms of export. It is partly due to its agricultural production. Soy is one of its most important commercial product. Producing a ton of soy takes 6 tons of irrigated water (Fogarassy et al., 2014). The price of soy has been relatively cheap because the U.S. has had favourable attributes to produce it. A basic discipline of regional economics is that production moves to areas where it can be conducted most efficiently. Market proximity has also been a key factor. Nevertheless, in the world of opening markets and shortening distances cost-efficient production comes first. As the opportunity costs have arisen for the U.S. by the depletion of water reservoirs, its policy makers must rethink their international trade strategy. This example is one from the many. The question emerges: “to whom is global production truly worth it?” On the one hand, there is a country to give up on its resources through exported products. Despite the overall recognition, it is not always a developing one. On the other hand, there is a receiving nation where the imported goods – in some cases – decrease the competitiveness of local ones. One eventually stays without resources and the other faces economic problems. However, this phenomenon is worth for international corporations engineering it (Korten, 1995). To interfere with Mr. Webb’s earlier quote: history has faced the age of empires, then the time of nation states, but the next period might be the epoch of corporations. The truth is that the war over resources is still an ongoing one. For a particular reason, the rules of the game have changed. Nowadays, it is fought between countries offering their resources and not between the ones who tend to use them (Gedicks, 1993). Hosting international companies have become a virtue and political parties proudly announce if they seduce them. Obviously, the motive of those companies is to receive favourable financial incentives and most importantly, underestimated resources.

Results and recommendations

This study promised a perspective on the interference of environmental policy in business processes and the way they can steer consumers to a more sustainable attitude. After the presented thoughts, this movement may not be considered entirely as environmentalism. It is rather pure economics. A focus point of economics is the way society manages its scarce resources (Mankiw, 2012). Since natural resources are usually not valued accurately, environmental policy only adjusts their price. By this logic, protesting against its tools means that someone does not want to pay for the resources they use. For a better interpretation, there is an example from strict economic practice. 20 years ago, economist Alan J. Auerbach (1951-) introduced the idea of border adjustment tax. His concept was about creating balance in cross-border money flow and holding back companies, which aim at offshore profits (Auerbach 1997; 2010). That notion could be considered as the outcome of globalisation and global productions systems. The taxation of import products is a tool to defend local producers against cheaper foreign ones. According to the previous elaboration, a main reason for those products being cheap is that resources used for their production are undervalued. A similar tax forces companies to pay that price at the other end of the product lifecycle. It can be important for countries with a relatively advanced social welfare standard or environmental consciousness. Companies do not prefer these areas for industrial production since wages are high and environmental regulations are strict. Both increase production costs (Horváth et al., 2015). Environmentalists have been pressing this instrument for a long time. They offer carbon-based border adjustment tax to avoid carbon-leakage (Fischer – Fox, 2009). The suggestion of the present research is to offer the consideration of resource-balances. In the perspective of resource values, border adjustment taxes are only “end-of-process” solutions. They can protect local producers in the target country but they are not going to protect the resources of the exporting nation. The price of those resources must be charged on the producers right at the beginning. The problem of traditional export-import rates is to neglect the complete material flow. By the export of a product, a country gives up on all the resources used for its manufacture. An intense export activity might induce considerable economic growth but exhausts native resources in the same way.

The paradox of the current paper is to stress the importance of local production systems by highlighting the unsustainable processes of global ones. After the historic development of the current phase, the question shall arise: “would it be a solution to return to local provision systems?” The answer for that question is “no”. The structural change of production – especially in case of agriculture – was essential to sustain the activity of the growing population. As environmental-oriented researches also indicate, the solution would be on the way middle between ecological and intense production (Fogarassy et al., 2016). The question from the other end also emerges: “does humanity truly need mass production?” The answer would be the same as for the previous one. Mass production was first a tool to satisfy the needs of the increased population. Later, economies have developed a tight relation with this method, that they needed it for further development. This is where the problem starts. Consumer society has been created and has determined society’s attitude ever since. It promotes single lifestyle, so people would buy more products (Szaky, 2014). The possession of goods have become a status symbol. Despite having leasing services people are obsessed with ownership (Stahel, 2010). According to certain social scientists, the main problem is that consumption took over the role of work. 100 years ago, social status has been determined by the job of the individuals. It has been a prestige to work as a lawyer, scientist or doing other intellectual jobs. Nowadays, people are judged by their property, car, house, clothes, etc. (Ransome, 2005). By logic, the prestige of a job would still enable people to have higher salary and afford expensive goods. However,

consumer society works otherwise. It has come up with tools to offer the illusion of wealth to people. Banks provide loans to satisfy not only traditional economic purposes (e.g. investments) but also consumption motives (Fogarassy et al., 2017). Former prestige products have become widely accessible, only with lower quality and shorter lifespan. Their appearance might be the same as for the expensive ones, but they – and the resources used for their manufacture – go to waste faster. These goods belong to multinational companies, which harness precious resources at one place and sell their products in the other. For consumers, price could be a decisive factor and leads customers to buy global products. The usual argument is to consider, that the low price they pay will leave their country and the money spent on local products would remain within borders. This observation is clearly true, but the conclusion of the current study is rather to pay attention to resources. The support of global production systems would indicate their spread and it is not only money to flow across borders but also resources. The necessary attention could be drawn by showing the true cost of products by resource-based corrections.

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