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THE PROBLEM OF WASTE INTENSITY IN ENTREPRENEURIAL BUSINESS MODELS*

Abstract

A key feature of the market economy and the mechanism of its growth, as defined by J. A. Schumpeter, is an incessantly expanding avalanche of consumer goods which eventually transforms into an expanding waste stream. In fact, waste is a permanent feature of capitalist economy. Securing sustainable development requires that the realization of capitalist economic goals be accompanied by practical actions to solve the problems and threats arising from this fact. One of the key areas of this type of activity is directly correlated with entrepreneurial business models. A different understanding of the notions of growth and sustainability allows for a distinction between two separate models of waste management: the market model, which entails the intervention of public authorities, and the environmental model. Both are oriented at stimulating economic growth, increasing welfare and employment. Both also respect the requirements of the environment and focus on solving the problems of waste and waste intensity. Development is perceived differently in each of the respective models. The market model refers to neoclassical economics and a dialectical understanding of economic growth, while the environmental model is based on the foundations of classical economics. The entrepreneurs' approach to the problem of waste intensity remains closely correlated to the waste management model within which they operate. In the market model, the entrepreneur concentrates his actions on salvage and recycling of the waste already produced, whereas the entrepreneur seeks to limit waste in the environmental model by putting the "earn more selling less" rule into practice.

Keywords: economic development, sustainable business model, waste intensity, waste management model.
JEL Classification: E21, Q530.

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1. Introduction

Some of the most important features of the capitalist economy and its growth, as seen from the perspective of waste intensity, are addressed by J. A. Schumpeter in *Capitalism, Socialism and Democracy.* He discusses revolutions taking place in the economy, which "periodically reshape the existing structure of industry by introducing new methods of production (…). Now these results each time consist in an avalanche of consumers' goods that permanently deepens and widens the stream of real income, although in the first instance they spell disturbance, losses and unemployment. And if we look at those avalanches of consumers' goods we again find that each of them consists in articles of mass consumption and increases the purchasing power of the wage dollar more than that of any other dollar – in other words, that the capitalist process, not by coincidence but by virtue of its mechanism, progressively raises the standard of life of the masses" (Schumpeter 1950, p. 68).

The ever-expanding avalanche of consumer goods transforms into an expanding stream of waste. As such, waste is an intransigent feature of the capitalist economy. As D. L. Sayers notes, "a society in which consumption has to be artificially stimulated in order to keep production going is a society founded on trash and waste, and such a society is a house built upon sand" (Packard 1960, p. 15). She thereby points out how fragile economic growth is when achieved by violating the relations between man and the environment. She urges us to look for solutions to allow for the achievement of capitalist economic goals while avoiding the negative repercussions of waste.

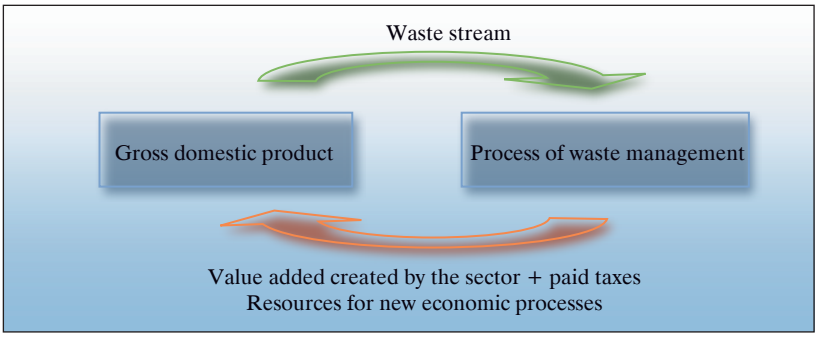

Fig. 1. The Bilateral Relationship between GDP and the Waste Management Process

Source: the author's own elaboration.

The relationship between economic growth and the process of waste management is bilateral (Figure 1). Economic growth intensifies the waste stream, the latter being a subject of waste management. The development of a waste management system increases GDP because:

– subjects forming the waste management system generate value added and pay taxes,

– waste management closes the resource cycle in the economy, empowering economic growth despite limited resources.

One of the key elements shaping the waste intensity of the production process is the type of business model the company uses. How entrepreneurs approach the problem of waste intensity is a result of the waste management model they use, their hierarchy of values and goals for their economic activity, and their understanding of sustainability. Despite the common use of the term, its characterisation fundamentally differs across varying social groups.

2. The Notion of Sustainability and Its Evolution in Economics

Initially, the primary objective of the capitalist economy, within the framework of both economic theory and practice, was expressed by the notion of economic growth. Consequently, business models aimed at maximising financial profits – at all costs and by all means. Numerous negative phenomena accompanying economic growth, occurring on economic, social and ecological fronts, were (and still are) treated as unavoidable costs, ones that need to be covered in the name of acting rationally (Sadowski 2007, p. IX). However, they were and are a consequence of violating the basic conditions which capitalist societies need to meet. In particular, they violated the golden rule, "do unto others as you would have them do unto you," and violated the unwritten principle that any given capitalist society and system must be moral and meet certain moral criteria (Anderson 1992, p. 81).

A scarcity of resources and negative consequences of constantly pursuing economic growth lead to the evolution of new paradigms as well notions for conceptualising and distinguishing development and sustainability. However, economists perceived these new paradigms as something imposed from the outside. The prevailing concept is homo economicus, guided by egoism and greed. Bearing in mind T. S. Kuhn's remarks on scientific revolutions, we should expect that achieving universal approval for a new understanding of growth and sustainability would require a paradigm shift or full generational

change (Kuhn 1996). Nevertheless, the dominance of the concept of homo economicus in the field of economics has resulted in unjustified uses of the term "sustainability," in which the concept was applied to all possible socio-economic activities. It is also visible in major differences between how development and sustainability are defined.

Contemporary economic thought distinguishes two main approaches in interpreting development and sustainability. The first approach treats economic growth and development as synonymous, using them interchangeably. The second approach treats them as two separate categories, economic development being the broader category and subsuming economic growth.

Development is defined across a number of socially and politically-oriented documents as well as in the broader literature. The approach that is crucial to the analysis in this paper conceptualises development as consistent with an accepted system of values, describing it as "a process of positively assessed changes according to a particular value system (that is, a set of rules describing that system)" (Borys 2003, my translation). It therefore remains relative. The evolution of a system of values changes how development is understood. A representative feature of development repeatedly highlighted in the literature is sustainability, which is expressed in an integrated order: it encompasses social, institutional, political, economic, environmental and spatial orders (Borys 2011, pp. 76–77). Accordingly, a sustainable business model can be defined as a combination of a company's strategy and technology used in its practical implementation, contributing to building sustainable order.

Within the aforementioned, criteria-based understanding of development one can distinguish two types of definitions. The first are definitions marginalising economic values and operating primarily in reference to values beyond economics (e.g. anthropocentric, biocentric). The second type includes definitions closely bound to the values and goals of mainstream economics and refers primarily to economic criteria.

Within the first type, an excellent example would be Principle 1 of Sustainable Development provided in the Rio Declaration on Environment and Development, which states that "human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature" (*Rio Declaration…* 1992). So the Declaration stresses the superiority of human beings, with the primary measure being the interest of human beings.

Other examples of marginalising economic criteria can be found in the works of A. Sen, who understands development as a process of broadening the range of freedoms humanity can enjoy. It requires eliminating subjugating factors such as poverty, limited entrepreneurial opportunity, systematic social repression, a lack of social insurance, intolerance, or the interference of totalitarian or authoritarian states in social processes. Sen's concept of development serves as an axiological basis for the idea of sustainable development. The second type of the non-economic approach, utilising biocentric criteria in defining development, can be found in the encyclical *Laudato si'* which, due to its environmental dimension, was enthusiastically received throughout the world. Pope Francis condemns the anthropocentric perspective with roots in the Book of Genesis. What matters is life as such, including all of its forms. "Each creature possesses its own particular goodness and perfection" (*Encyclical Letter…* 2015, p. 55). Therefore, development means that "human beings, endowed with intelligence, must respect the laws of nature and the delicate equilibria existing between the creatures of this world" (*Encyclical Letter…* 2015, p. 54).

A much bigger and better-established group of definitions are those based on the goals and values typical of mainstream economics. The World Commission on Environment and Development defines sustainable development as "a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations" (*Report of the World Commission…* 1987). Similarly, the definition provided in the Europe 2020 strategy states: "Sustainable growth means building a resource-efficient, sustainable and competitive economy, exploiting Europe's leadership in the race to develop new processes and technologies, including green technologies, accelerating the roll out of smart grids using ICTs, exploiting EU-scale networks, and reinforcing the competitive advantages of our businesses (…)" (Communication from the Commission… 2010). Many scientists and researchers define development in an approximate manner.

Another important issue arising in the analysis of the notion of development is the conflict between growth and the values of mainstream economics. This contradiction is particularly visible in terms of waste intensity. In definitions relating to economic values, development cannot negatively influence economic growth nor any of its elements. Development makes it possible to maximise the net benefits from economic growth while preserving the utility and quality of natural resources in the long run. This

results in rising income per capita and the improvement of other factors contributing to social welfare. At the same time, however, growth requires limiting the consumption of material goods and services to an ecologically acceptable level in order to preserve the environment for future generations. As is relatively obvious, this condition contradicts economic development. Therefore, limiting consumption must be followed by changes in the vector of socio-economic goals, along with other welfare measures.

3. Models of Waste Management

Different understandings of development and sustainability allow one to construct two models of waste management: a market model with the intervention of the public authority (hereafter referred to simply as the market model) and an environmental model (Piontek 2015). Both models are oriented toward stimulating economic growth, increasing welfare and employment. Also, both respect the requirements of the environment and focus on solving the problem of waste and waste intensity. Development is perceived differently in each of the models. The market model refers to neoclassical economics and a dialectical understanding of economic growth, whereas the environmental model is based on the foundations of classical economics.

In the market model, ecological aspects of material and resource management are superseded by strictly economic priorities. A rising amount of waste is a highly desirable phenomenon from the macroeconomic point of view. Therefore, preventing waste production, although recommended and desirable from the ecological point of view, contradicts neoclassical economics and is highly unlikely to be put into action. The incessantly expanding waste stream is a phenomenon desired by producers of goods, consumers, waste processing businesses and the public sector. In the area of waste management, sustainability is expressed through actions aimed at utilising the expanding waste stream. This is why the development of innovative technologies plays a crucial role in allowing for the utilisation of waste that is increasingly difficult to process.

The market model of waste management is represented in Figure 2, which depicts the basic components of the system, their goals, movement of resources, products and waste between the components.

The most important factors influencing the expanding waste stream are production and consumption. Persistent innovation leads to more efficient of production processes and thus higher production, the introduction of

completely new products and services to the market as well as new models of already existing ones. Production can be increased thanks to the use of an increasing stream of natural resources. In the long term, the economy seeks to utilise all of the available resources in the process of growth. Consequently, production growth translates into an expanding waste stream. The pace of economic growth is dependent on the amount of resources introduced into the economic mechanism and the speed of their circulation in the economy. The more resources that are utilised, the more goods rapidly turned into waste and waste again turned into resources, the faster the pace of economic growth becomes.

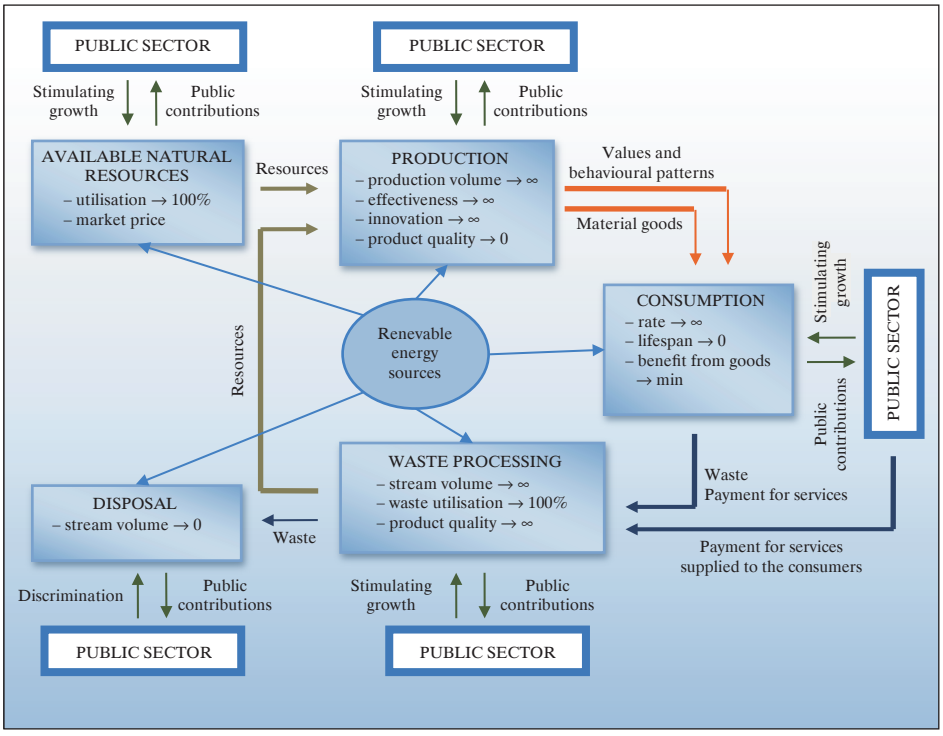

Fig. 2. Mechanism of Economic Growth Using the Market Model of Waste Management

Source: the author's own elaboration.

In the market model, expanding the waste stream is possible as a consequence of either defective pricing of natural resources or assuming

the possibility of full recovery of resources from waste and unlimited provision of energy from renewables to the economy. The prices of resources are market prices. This means that they do not reflect the actual value of resources determined by their limited quantities. Unlimited world trade doctrine plays a dominant role in shaping the prices of resources, leading to continued price reductions and maximising the short-term profits of producers. Prices are also shaped by normal cyclical fluctuations, political phenomena and speculation.

Key features of the environmental waste management model differ from those presented above. The environmental model is based on classical economics. In defining the notions of development and sustainability, it refers to non-economic values. It also assumes that the state should not intervene in the creation of waste management processes, but instead leave it to free market mechanisms and their self-governing regulators. The state's functions, according to this model, should be redefined and limited to shaping the basic features of the economic environment. The waste managing process remains ecological. Waste is treated as a collection of resources to be utilized in the most effective way possible. Waste creation is an unwanted phenomenon and should be minimised. The environmental waste management model consists of the same components as the market model. However, the subjects are governed by different values and goals (Figure 3).

Production, consumption and waste processing require that the prices of raw materials and resources to be shaped according to their actual value as determined by their limited quantities (as suggested by von Waizsacker, Lovins and Lovins (1998) in the first principle of natural capitalism, stating that prices should tell the ecological truth.

Using the actual prices leads to a re-evaluation of the goals of economic activity, processes of production and consumption as well as waste management. Business philosophy is reflected by the rule "earn more selling less". Businesses achieve profits by saving resources and limiting waste production. Profit is generated as a result of selling high-quality products to an increasing number of clients, instead of maximising the number of transactions with a very limited group of consumers. This strategy leads to standards of living and wealth being aligned among citizens throughout the world. At the same time, it eliminates excessive wealth and consumption in "highly developed countries." From the entrepreneurial point of view, the global market is sufficiently receptive and does not constitute a barrier to the functioning of enterprises. An entrepreneur following the rule "earn

more selling less" shows less interest in increasing production capacity in favour of improving the quality of goods and introducing new ones, designed to fit the real consumer needs.

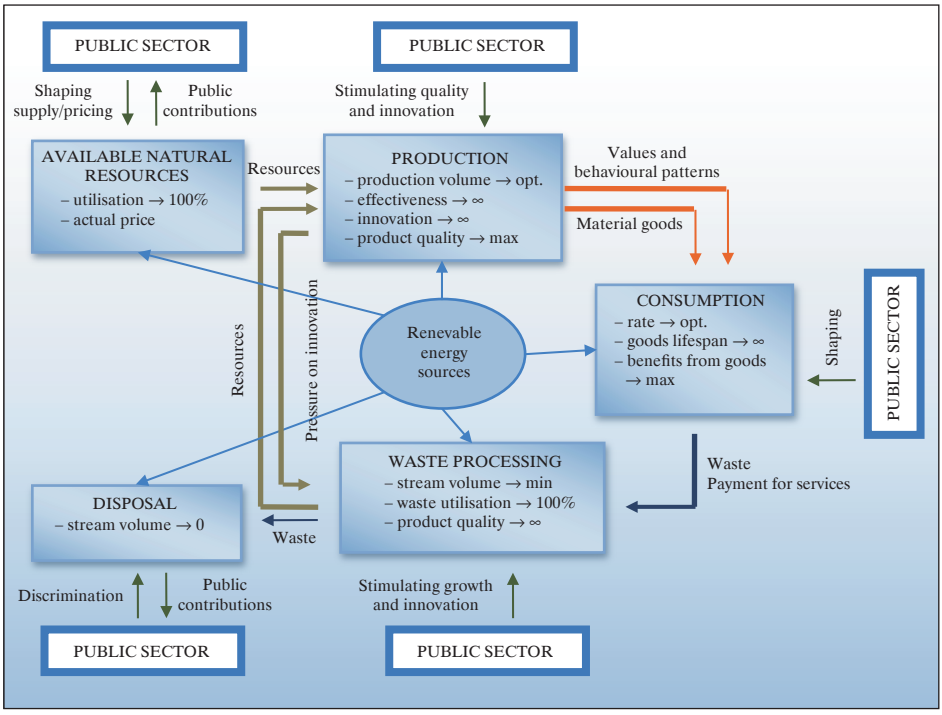

Fig. 3. Mechanism of Economic Growth Using the Environmental Model of Waste Management

Source: the author's own elaboration.

Desired behaviours can be also shaped by protecting ownership. In this case, waste production and everything that contributes to it is treated as a violation of private or public property. According to M. N. Rothbard, this in turn stimulates the interaction and action (particularly legal action) that promote the protection of ownership. The convicted party is forced to pay damage claims, which effectively prevents these kinds of violations. Sustainability in the environmental waste management model leads to an actual reduction in waste production.

4. Balancing Business Models in Terms of Waste Management

Functioning within the two waste management models forces entrepreneurs to shape their business models in relation to waste intensity. Entrepreneurs functioning within the market model cannot remain passive in the process of shaping demand for the goods they offer. The natural process of a product wearing out takes too long in relation to the needs of the market. Product wear, as with demand for new products, needs to be consciously and intentionally shaped, taking into account the process of product obsolescence. Therefore, business models are organised in relation to a primary objective: transform a product into waste in the shortest possible time. This can be achieved by following the 3Cs principle (as opposed to the 3R principle of reduce, reuse, recycle):

– create the need for increasing consumption,
– create the urge for increasing consumption,
– create the opportunity for increasing consumption.

The need to increase consumption is created as a consequence of well-established marketing techniques and current fashions. Producers aim to challenge and eventually destroy the value consumers ascribe to products they own. As P. Mazur points out, "style can destroy completely the value of possessions even when their utility remains unimpaired" (Packard 1960, p. 68). As a consequence of marketing influence, consumers perceive goods as worthless and in need of immediate replacement only because they do not present the features currently promoted in the mass-media. Simultaneously, they become convinced that the new goods being sold are more functional, which fully justifies purchasing them. Consequently, enterprise value is enhanced when the value of consumers' private property is destroyed.

The two most important decisions in the process of creating the need to increase consumption are those regarding the quality of products introduced to the market and their predicted lifespan. Producers facing those decisions need to choose between the following product quality strategies:

– the high-quality strategy,
– the frequent-purchase strategy.

The frequent-purchase strategy, used in the market model, forces the consumer to subsequently purchase the same goods to satisfy the same needs (see Slade 2007). This strategy ensures constant demand, which, when combined with unlimited world trade doctrine, maximises welfare and enhances GDP. Putting the strategy into practice, producers launch goods that either have precisely calculated wearable periods or meet the criteria

typical of waste. Fulfilling this strategy became possible as a consequence of devaluating the notion of quality. In its initial meaning, quality referred to degree of excellence. Contemporary textbooks distinguish different types of quality (e.g. technical quality, market quality), each of them described by an array of features. Thus, applying the market quality criteria, we can assess products as highly valuable, based on their exclusiveness, aesthetics or presentation, even if their lifespan is short and they require immediate replacement.

Juxtaposing the two strategies in terms of entrepreneurs' competitiveness and impact on economic growth, we should state that under current economic conditions the high-quality strategy poses a threat to businesses and is not desirable in terms of achieving growth in GDP. A "high--quality" producer releasing a long-lasting product results in a product being purchased relatively rarely. What is more, a durable product is more expensive than those offered by "frequent-purchase" entrepreneurs (the entrepreneur receives a deferred benefit from profits he would have achieved if he were repeatedly selling the same product to the same consumer). In consequence, long product lifespan discourages potential buyers guided by the principle: "More! Cheaper! More often!".

These product quality strategies are supplemented by the service policies companies apply in the warranty and post-warranty periods. In the market model, service in the warranty period often comes down to replacing products with new ones, instead of trying to fix them. This changes when the warranty period expires: customers are usually informed that reparation costs exceed the price of a new product, thereby being encouraged to purchase a new device. In addition, the lack of complete spare part catalogues and the practice of designing devices assembled from integrated modules contribute to forcing new purchases. In the second case, if a module fails, it needs to be replaced with an entire new one, instead of just exchanging a single part. For industries offering supposedly reliable and durable products (such as the automotive industry), "designing defects" became a common element of financial strategies, aimed at securing economic effectiveness both for the producers and the dealer-service networks.

Product planned obsolescence is not a new phenomenon – it was introduced by B. London at the time of the Great Depression (London 1932). He stated: "Factories, warehouses, and fields are still intact and are ready to produce in unlimited quantities, but the urge to go ahead has been paralysed by a decline in buying power (…). In a word, people generally, in a frightened and hysterical mood, are using everything that they own

longer than was their custom before the depression. In the earlier period of prosperity, the American people did not wait until the last possible bit of use had been extracted from every commodity. They replaced old articles with new for reasons of fashion and up-to-dateness. They gave up old homes and old automobiles long before they were worn out, merely because they were obsolete" (London 1932, pp. 1–2). London attributes the grounds of crisis to consumer behaviour. Guided by rationality, consumers fully utilise the goods they own, not responding to marketing and fashion. "People everywhere are today disobeying the law of obsolescence. They are using their old cars, their old tires, their old radios and their old clothing much longer than statisticians had expected on the basis of earlier experience" (London 1932, p. 2). As a consequence of his analysis, London proposed that the government should be able to arbitrarily set the lifespan of each product. After that period had passed, a product would be recognised as legally "dead" and collected for disposal by a government agency. As a consequence, consumers would be forced to regularly purchase new goods of certain kinds, which would ensure the continuity of production and employment.

London's concept was not utilised during the Great Depression, but has been in effect since World War II as a consequence of the rapid growth in productivity. It applies to all types of products introduced to the market. Planned obsolescence became a primary factor influencing economic growth in the capitalist economies of the 20th and 21st centuries. It constitutes a basis for supply-side economics, a theory represented by A. Laffer, R. Mundell and J. Wanniski. Supply-side economics was developed in response to the US economic crisis in the 1970s, which sealed the failure – it was then thought – of Keynesian economic policy. It was also a part of *Reaganomics*, a set of strategies meant to prevent economic recession during Ronald Reagan's presidency (1980–1988). The quality of goods produced in supply-side economics is subordinated to the companies' development strategies and the objective of achieving GDP growth. One characteristic of products should be their "waste quality", necessitating constant re-purchasing. Shaping their business models according to supply-side economics, entrepreneurs started providing consumers around the world with high quantities of cheap, low--quality goods which did and still do require frequent replacement.

Product planned obsolescence was recognised as an issue as early as in 1950s. In 1958, *Time* magazine quoted C. Briggs, vice-president of Chrysler, commenting on the progress taking place in the car industry: "auto service is bad, and the quality of cars is not as good as 10 years ago. The auto industry (…) has treated the public badly, to say it mildly" (Packard 1960,

p. 92). An official of the Automotive Finance Association quoted a similar approach of one of the Association's members when testifying at a US Senate subcommittee hearing: "The quality of today's automobile does not compare favourably with past years… The price of the product continues to go up and the quality continues to go down. Improvement in automobiles in the past few years has strictly been tinsmith work" (Packard 1960, p. 93). Eventually, G. Lippincott (industrial designer) provided the following telling assessment of the quality of household devices: "My mother had the same washing machine for twenty years. She has the same refrigerator now she had when I went to high school thirty years ago… We [my own family] built a 'leisure house' five years ago… We're on our second washing machine and our second drier… We threw out the disposal… We're on our third vacuum cleaner" (Packard 1960, p. 102). Among numerous examples of product ageing, it is worth noting that since 2005 the average lifespan of computers has fallen from 5 to 2 years (*2012 Annual Report…*). The average life-cycle of mobile phones fluctuates between 12 and 18 months and is subject to constant shortening.

In Poland, as in other Eastern Bloc countries, product planned obsolescence became common practice with the socio-economic transformations of the 1990s, the introduction of a market economy and the entrance of international corporations to the markets. In socialist economies, which are not subordinated to economic efficiency in a narrow sense and characterised by a significant scarcity of goods, shortening a product's lifespan couldn't be rationalised. During the transformation period, the societies of Eastern Bloc countries remained unaware of new consumption mechanisms and uncritically accepted them. Hence, socio-economic transformations were followed by both qualitative and quantitative growth of the waste stream. The only form of waste management was disposal.

The mechanism of product planned obsolescence also indirectly contributed to the collapse of domestic enterprises. Enterprises of the Eastern Bloc countries were not sufficiently efficient, but they offered long--lasting products. Suddenly, they had to compete with global companies offering cheaper, good-looking products that – consumers were not told – needed to be frequently replaced with new ones. The result of the free market competition was a foregone conclusion for the domestic enterprises. The now-freed demand needed to be managed. Social consciousness and consumer choices in Eastern Bloc countries, including Poland, are a separate issue.

A third element of the 3Cs principle is creating opportunities for increasing consumption. This includes building necessary infrastructure and providing potential buyers with financial means necessary for incessant consumption. All-night shops, enabling shopping 24/7, online stores, and personalized e-commerce are just a few examples of the unlimited shopping infrastructure. Securing financial means for consumption is achieved by developing payment and debt instruments.

Entrepreneurs' actions with regard to sustainability in waste management are shaped by legal instruments defined by public authorities. Contrary to official statements (expressed, for instance, in the European waste hierarchy), public authorities do little to nothing to prevent waste production. The instruments not being used include:

– regulations defining the minimal shelf and use life of products,

– requirements regarding the design of goods so they can be repeatedly repaired together, and forcing producers to provide service and complete spare parts catalogues throughout the entire use life of a product,

– obligatory customer information regarding product lifespan and the producer's financial responsibility for its utility during the lifespan,

– restrictions on the maximum weight of products and packaging,

– goods designed in compliance with the requirements governing their eventual recycling and salvage and eliminating solutions which impede this process.

The official argument against using the listed instruments is that they violate entrepreneurial freedom. In fact, the actual counteracting of waste production requires neoclassical economics and a dialectical understanding of economic growth to be abandoned for a return to classical economics. This approach, however, does not currently have a sufficient number of supporters.

Legal instruments used by the state focus on managing waste already produced. In business models, entrepreneurs are obliged to respect the following:

– recommendations (of unspecified and imperative need) on designing goods in compliance with the requirements of their future recycling and salvage,

– the obligation/possibility to label products released on the market,

– the obligation to eliminate harmful substances and those impeding the process of salvage and recycling,

– the obligation to meet the rates for recovery and recycling,

– the obligation to participate in the waste management system financing,

– the obligation to create collection systems for separated fractions of waste,

– the obligation to use recyclables in production processes.

The process of designing waste management strategies in the environmental model differs from the ones presented above. When shaping business models, producers prefer a high-quality strategy. They want to introduce durable, reliable products bringing the highest possible benefits to customers during their long period of utility. Planned product obsolescence is rejected. Consumption is meant to improve the quality of a consumer's life instead of simply accelerating economic growth. Enterprises serve to meet consumer needs, instead of merely profiting from them and enhancing GDP. Products are replaced with new ones as a result of consumers' conscious decisions based on real premises, when they are actually used or when the new models offer significant improvements. When poised to make purchases, consumers acquire information about a product's lifespan and thereby make rational decisions. That, in turn, leads to limiting unnecessary waste. Customers are not encouraged to constantly and mindlessly exchange goods, and the value of goods is reflected by their utility instead of current fashion and trends (Piontek 2015).

Fig. 4. The Oldest Light Bulb. The Bulb Has Shone since 1901. Fire Station in Livermore, California, USA

Source: Centennial Bulb, http://www.centennialbulb.org. Accessed: 15 December 2015.

Producing high-quality and long-lasting goods is not (and never was) problematic from a technological point of view. The only reason for such goods to not be produced lies in the contradiction between producing high-quality products and maximizing profits: the latter, realized in the circumstances of considerably narrow targeting, excludes high quality. Before the era of cost-effectiveness, numerous products made to serve for decades were manufactured, even as early as the turn of the 20th century. For example, the same light bulb has illuminated the Livermore fire station since 1901 (Figure 4).

5. Conclusions

It is not possible to fully eliminate waste intensity in a capitalist free--market economy. Waste production marks one of the necessary conditions for economic growth. A definite "no" to waste intensity would equal rejecting a capitalist economy. All actions limiting consumption – including those preventing waste production – slow down economic growth and are therefore rejected by entrepreneurs, societies and public authorities.

Securing sustainable development requires that the realisation of capitalist economic goals be accompanied by practical measures to solve the problems and threats that arise. One of the key areas for these preventative measures lies with entrepreneurial business models. Entrepreneurs' approach to the problem of waste intensity remains closely correlated to the waste management model within which they operate. In the market model, the entrepreneur concentrates his actions on salvaging and recycling the waste already produced, whereas in the environmental one, the entrepreneur seeks to limit waste by putting the "earn more selling less" rule into practice.

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Abstract

Problem odpadogenności w modelach biznesowych przedsiębiorstw

Istotą gospodarki kapitalistycznej i mechanizmu jej wzrostu wyrażaną przez J.A. Schumpetera jest nieustannie powiększająca się lawina dóbr konsumpcyjnych. Z natury rzeczy ulega ona przekształceniu w powiększający się strumień odpadów. Zjawisko odpadów jest zatem immanentną cechą gospodarki kapitalistycznej. Zapewnienie rozwoju zrównoważonego wymaga, aby realizacji celów gospodarki kapitalistycznej towarzyszyły realne działania na rzecz rozwiązywania pojawiających się problemów i zagrożeń. Jednym z kluczowych obszarów działań są modele biznesowe przedsiębiorstw. Odmienne rozumienie pojęć rozwoju i zrównoważenia pozwala zbudować dwa modele gospodarowania odpadami: rynkowy z interwencją władzy publicznej oraz środowiskowy. Modele zorientowane są na pobudzanie wzrostu gospodarczego, powiększanie bogactwa oraz zatrudnienia przy zachowaniu wymogów środowiska i rozwiązywaniu problemu odpadów i odpadogenności. Rozwój w proponowanych modelach jest odmiennie postrzegany: w modelu rynkowym zgodnie z ekonomią neoklasyczną i dialektycznym postrzeganiem rozwoju gospodarczego, w modelu środowiskowym zgodnie

z założeniami ekonomii klasycznej. Podejście przedsiębiorców do problemu odpadogenności pozostaje ściśle skorelowane z modelem systemu gospodarowania odpadami, w ramach którego funkcjonują. W modelu rynkowym przedsiębiorca koncentruje swoje działania na procesach odzysku i recyklingu odpadów już wytworzonych, a w modelu środowiskowym na zapobieganiu powstawaniu odpadów, kierując się zasadą „zarabiam więcej, sprzedając mniej".

Słowa kluczowe: rozwój gospodarczy, zrównoważony model biznesowy, odpadogenność, model gospodarowania odpadami.