

# Will indiscriminate consumption put a brake on economic growth?

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## Abstract

In recent years, a good deal of the economic thought has been devoted to the ever urging issue of limits to growth<sup>1</sup>. This is understandable as we are increasingly conscious that economic growth may have its inherent limits due to scarcity of resources, shrinking reserves of cultivable land, population explosion, particularly in the less developed areas of the world, and other important reasons. All this has been well documented in both scientific publications and in the media and the participants of this Conference are among the last ones who need to be convinced that economic growth may after all face some limitations.

There is, however, one aspect of the problem that is worth repeating over and over again regardless of the obvious truth that it is one of the major factors of economic growth or of any economic activity, for that matter, viz. *consumption*. The present paper is looking into some aspects of human consumption that while being a major contributor to economic growth may become a factor that will limit this growth. No matter how paradoxical that statement may appear at first glance, consumption, and especially excessive or indiscriminate consumption, may hamper economic growth.

Cite as: Chrzanowski Ignacy H., Will indiscriminate consumption put a brake on economic growth?, *Prac i Materiałów Powiślańskiej Szkoły Wyższej*, III międzynarodowej konferencji naukowej pod nazwą „Oblicza dobrobytu”, 2012.

## Will indiscriminate consumption put a brake on economic growth?

### Introduction

In recent years, a good deal of the economic thought has been devoted to the ever urging issue of limits to growth<sup>1</sup>. This is understandable as we are increasingly conscious that economic growth may have its inherent limits due to scarcity of resources, shrinking reserves of cultivable land, population explosion, particularly in the less developed areas of the world, and other important reasons. All this has been well documented in both scientific publications and in the media and the participants of this Conference are among the last ones who need to be convinced that economic growth may after all face some limitations.

There is, however, one aspect of the problem that is worth repeating over and over again regardless of the obvious truth that it is one of the major factors of economic growth or of any economic activity, for that matter, *viz. consumption*. The present paper is looking into some aspects of human consumption that while being a major contributor to economic growth may become a factor that will limit this growth. No matter how paradoxical that statement may appear at first glance, consumption, and especially excessive or indiscriminate consumption, may hamper economic growth.

### Consumption – the engine of economic growth

Consumption is the main contributor to economic growth and the largest GDP component. It is estimated that some 65 percent of GDP in the industrial countries accrue from consumption. Regardless of how simple this may appear, the issue of the actual contribution of consumption to GDP needs some refinement. It is not always obvious that only newly produced goods are taken into account when computing GDP. Second-hand goods, including such important items as houses<sup>2</sup>, cars, expensive furniture or plasma TVs that are re-sold, do not contribute to the current year's GDP because they have already been accounted for when produced.

There are many determinants of the effect consumption has on GDP and these are rather well described in economics. For the sake of consistency, however, we are quoting some of the more important ones, such as<sup>3</sup>:

- Current income. It comes from employment (wages and salaries), capital (inte-

<sup>1</sup> There is a wealth of literature on economic growth. One could mention, for instance: R.J.Barro; D.K.Foley; O.Galor;R.E.Lukas; J.Schumpeter, D.Weil, L.Weber; R.M. Solov, N.Kaldor, to name just a few.

<sup>2</sup> The market for existing homes in North America is huge. But the value of these houses upon their resale is not included in the current year's GDP. Only the sales tax enters into GDP but under a different heading.

<sup>3</sup> See, for instance: V. Piana): Consumption: a key concept in economics. <http://economicswebinstitute.org/glossary/cons.htm>.

rest, dividends, etc.), remittances from abroad<sup>4</sup> and assets possessed by households. When using the term “income” we usually think of the “net disposable income”.

- Cumulated savings can give rise to an increased consumption; however, a large portion of such an increased consumption is financed from debt which can lead to an overburden of debt servicing – a fairly dangerous situation for many households. It is worthwhile mentioning that an average household in Canada, for example, carries a debt burden of roughly 150 percent of its yearly income<sup>5</sup>. It is estimated that in the U.S. consumer expenditure reaches 96 percent of personal disposable income<sup>6</sup>.
- Expectations in regards to the future income and the level of consumers’ confidence.

Even these few factors imply that trends in personal consumption may be extremely volatile. In periods of prosperity these expectations may lead to an unjustified euphoria which translates into overspending and increasing debt burden. Conversely, in times of poor economic prospects, consumption will shrink and consequently GDP will fall.

In terms of Government consumption the trends appear to be less volatile as Governments will invariably have to deliver basic services to the public. It is estimated that Government consumption accounts for some 15-20 percent of GDP. These figures, however, vary considerably from one country to another and generally tend to be higher in richer countries compared to the poorer ones.

There exist wide gaps in terms of the levels of consumption across the countries. As data in Fig. 1 and 2 below indicates, the world’s richest 20 percent of people consume over  $\frac{3}{4}$  of the total while the poorest 20 percent account for only 1.5 percent of the total consumption. Needless to say these disparities have a strong impact on the world’s economy and its future. More detailed information on Government consumption is provided in table 1 below. More specifically, the richest fifth of the world’s population:

- Consume 45% of all meat and fish, the poorest fifth 5%
- Consume 58% of total energy, the poorest fifth less than 4%
- Have 74% of all telephone lines, the poorest fifth 1.5%
- Consume 84% of all paper, the poorest fifth 1.1%
- Own 87% of the world’s vehicle fleet, the poorest fifth less than 1%<sup>7</sup>.

These statistics are confirmed in graphs presented in Fig. 1 and 2 below.

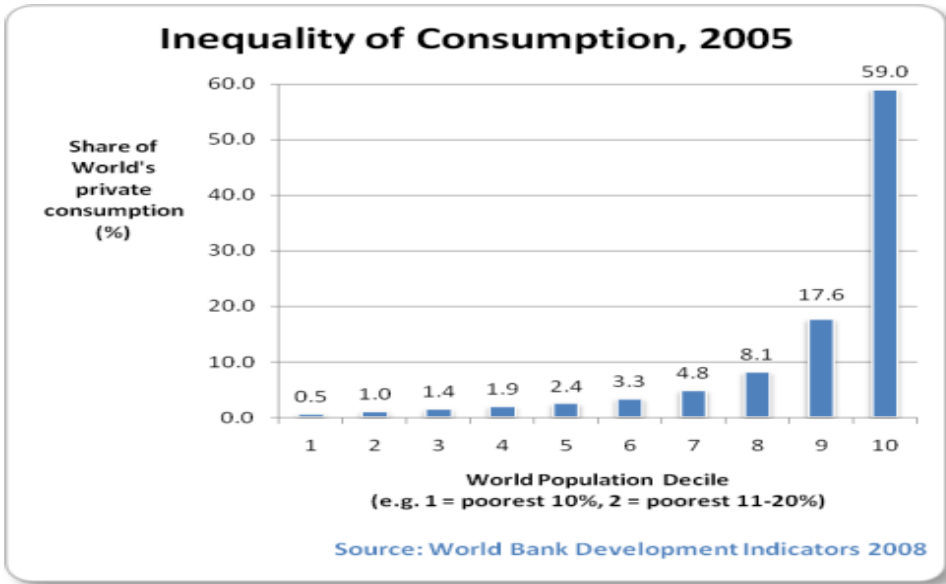
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<sup>4</sup> In some countries, Poland included, remittances from family members living and working abroad represent an important part of the nation’s budget. There is some evidence suggesting that high spending by Polish households was possible precisely thanks to remittances from abroad. These may fall as recession in the EU reduces considerably employment opportunities for Polish workers in the West European countries.

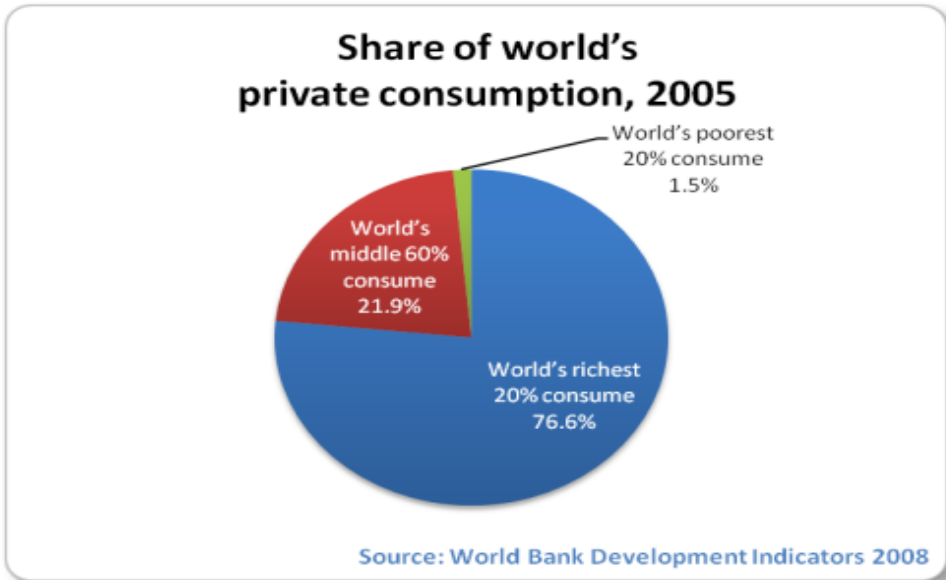
<sup>5</sup> See, Statistics Canada.

<sup>6</sup> See, for instance: Christian E. Weller (2002): Consumption and Economic Growth. Economic Policy Institute; February 13, 2002; p. 1. Any surge in consumer spending is financed not from increases in net disposable income but from borrowing.

<sup>7</sup> World Bank Development Indicators 2008.



**Fig. 1.** Consumption by the world population in 2005  
Source: World Bank Development Indicators 2008.



**Fig. 2.** Structure of world private consumption  
Source: as in Fig. 1.

However, these striking differences in the level of consumption between rich and poor will not answer the question of whether excessive or indiscriminate consumption can be indeed a decisive factor in reducing economic growth. Truly, less fortunate na-

tions still have a long way to go to catch up with the richer ones in terms of per capita consumption and for the former ones the answer is fairly simple: they need to encourage consumption by their populace to keep their economies growing. Understandably, for the rich nations the answer is not that simple.

**Table 1.** Government final consumption by 10 leading nations (in current U.S. dollars)

Rank	Year	Country	' 000 current U.S. dollars
1.	2004	United States	1,844,600,000
2.	2004	Japan	823,299,400
3.	2005	Germany	518,816,100
4.	2005	France	504,409,900
5.	2005	United Kingdom	478,914,500
6.	2005	Italy	357,614,700
7.	2005	China	317,441,400
8.	2005	Spain	200,129,300
9.	2004	Canada	190,448,900
10.	2005	Brazil	155,606,000
-	-	-	-
<b>22.</b>	<b>2005</b>	<b>Poland</b>	<b>58,863,510</b>

Source: <http://www.nationmaster.com>: Government Statistics

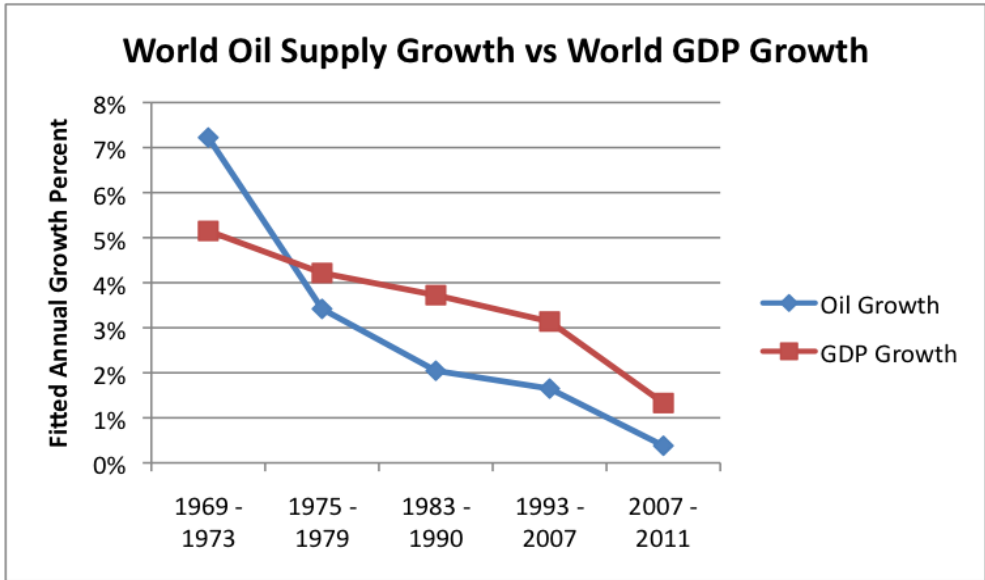
The main focus of this paper does not allow us to venture more deeply into the question of Government spending but the overall conclusion is that its role for the national economy of each and every country cannot be overestimated. Governments, even in those countries that are universally recognized as champions of free-market economy, such as the U.S., play a crucial role in stimulating economic growth.

So if consumption is the principal contributor to GDP how can it be considered a reason for reducing this growth? The following sections of the present paper will shed some light at this apparently ill-formulated question.

### **Energy consumption as a factor limiting economic growth**

Traditional patterns of energy consumption make world economy almost totally dependent on non-renewable sources of energy such as petroleum, coal and even nuclear energy, despite considerable efforts to diversify energy production and increase the share of clean, renewable energies, such as hydro or solar energy. Moreover the traditional sources of energy, in particular crude oil, are being depleted at a fast rate. Some researchers will disagree with this statement but there seems to be a consensus amongst the analysts that oil reserves will last at most for the next 30-40 years. Consequently, the era of cheap energy may well be over for good and this may have a finite effect on further economic growth.

G. Tverberg<sup>8</sup> in her interesting and well documented article has shown that there exists a close relationship between energy consumption, mainly from oil, and the volume of GDP. Fig. 3 below clearly illustrates a close correlation between world growth in oil supply and GDP. In relative terms, the rate of increase in oil supply and GDP growth are declining, however. They were 7 percent and 5 percent respectively in the period 1969-1973 but fell to 0.4 percent annually for oil and 1.6 percent for GDP in the subsequent periods.



**Fig. 3.** World oil supply growth and GDP growth  
 Source: G. Tverberg; op.cit ; p. 4.

The fact that the rate of increase of GDP is higher than that for oil is the result of two factors: technological progress and energy conservation. Both are interdependent because conservation of energy relies heavily on new technologies and innovation, such as new engines for automobiles, energy-saving electric bulbs or a new generation of household appliances. The following figures 4 and 5 illustrate progress made in terms of energy efficiency as seen from the energy intensity indices.

<sup>8</sup> G. Tverberg: Oil limits are leading to declining economic growth. "Oil Voice", July 16, 2012.

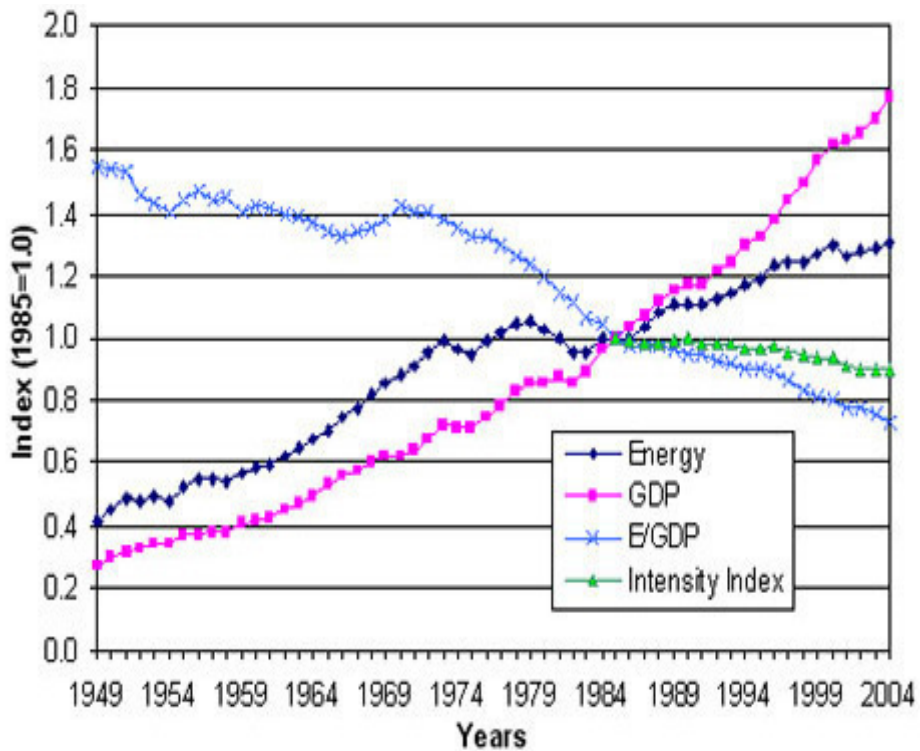


Fig. 4. Economy-wide energy intensity indicators (total energy) 1949-2004

Source: Energy Efficiency and Renewable Energy; [http://www.1.eere.energy.gov/ba/pba/intensityindicators/total energy.html](http://www.1.eere.energy.gov/ba/pba/intensityindicators/total%20energy.html)

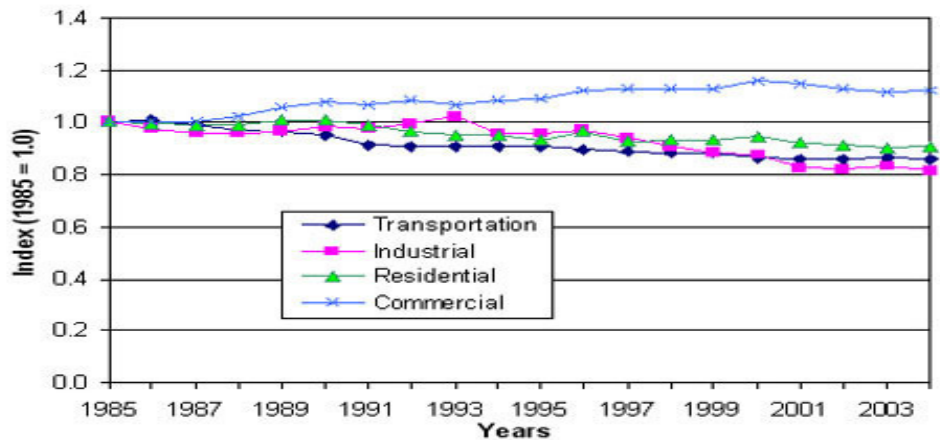


Fig. 5. Energy-intensity ratios for the end-use sectors 1985-2004

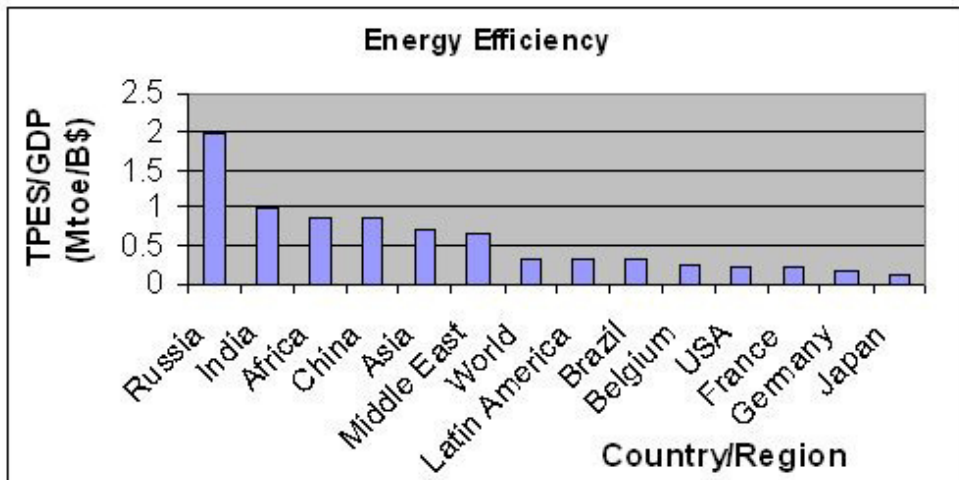
Source: as in Fig. 4.

A closer look at data in Fig. 4 and 5 provides some very important conclusions. Firstly, there has been an overall drop in energy intensity of GDP. Although available

data relates to the U.S. economy, similar trends are observed in other industrial countries, as well. This implies that energy-wise, it costs now less to generate one dollar of GDP than 50-60 years ago. Secondly, there have been differences in energy-intensity across the U.S. economy in the period indicated in Fig. 5. While industrial, residential and transportation end-users of energy have noted a decline in their energy-intensity ratios (19 percent, 9 percent and 14 percent respectively), the commercial energy end-users have seen their energy-intensity ratios increase by 12 percent over the corresponding period of time. This has been the result of various factors, the pricing policy of energy providers might have been the most significant one<sup>9</sup>.

The declining energy-intensity trend in the transport sector is very encouraging. In the U.S., where the transport industry alone accounts for 1/3 of the total consumption of oil, such a progress has been possible thanks to the introduction of fuel efficient vehicles and the strict enforcement of speed limits, among other things. Obviously, increasing prices of energy may change this declining trend in energy-intensity, but no one can deny the progress made so far.

This progress notwithstanding, energy consumption may constitute a barrier to economic growth, at least in some areas. As data in Fig.6 indicates energy efficiency varies enormously among the nations of the world, with Japan being the most energy efficient and Russia showing the worst record in this respect.



**Fig. 6.** Energy efficiency of selected countries and regions

Source: Energy "Consumption "and GDP. The second Law of Life. <http://secondlawoflife.wordpress.com/2007/05/17energy-consumption-and-gdp>, p.3.

<sup>9</sup> For instance, the Hydro-Quebec – the Government-owned electricity provider - widely uses cross-subsidization in its tariff policy whereby industrial users of electricity pay much lower rates compared to residential users. This policy aims at promoting business activity in the Province. Otherwise, industries would have left Quebec. Residential users do not enjoy such a luxury. A higher level of energy-intensity for commercial users compared to other sectors of the economy may also be attributed to the fact that modern commercial outlets, such as shopping malls for instance, have to maintain high standards ( air-conditioning, for example) for their customers. That leads to higher energy consumption.



But poor energy efficiency of the national economy is not only the Russian problem. Rapidly industrializing countries such as China, India or South Africa are also poor performers in this respect. It is interesting to note that Brazil, a member of BRIC, has a much better record in energy efficiency, compared to other newly industrialized countries. It also contributes less to the absolute volume of energy consumed among the newly industrialized countries.

However, ratios that illustrate energy efficiency do not provide the holistic picture in terms of energy consumption. What really matters is the absolute amount of energy consumed. Fig.7 provides a somewhat different picture of energy used in the world, with the U.S. being the world leader in energy consumption.

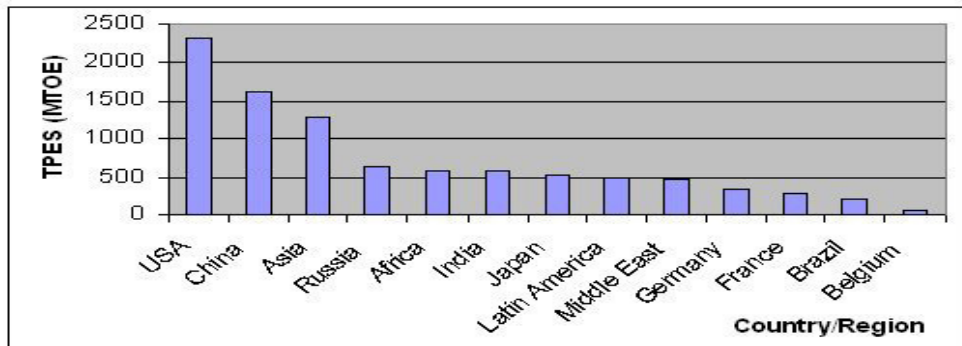


Fig. 7. Absolute energy consumption per country

Source: As in Fig. 6.

In the latter case Russia consumes only of the amount of energy used by the U.S. This difference is mainly due to the sheer size of Russian economy generating some 12 percent of the American GDP. The total population of Russia is less than half of the size of the U.S. population. There is a strict correlation between the absolute amount of energy consumed by a single country and the size of its economy.

The discussion so far was focusing on energy consumption and efficiency. The issue of how far energy may limit economic growth still remains open.

This paper cannot answer this question in unequivocal terms. On the one hand, there is no doubt that the absolute volume of energy consumption in the world will continue to grow. However, there is definite progress in terms of efficient use of energy as technology provides energy efficient solutions. They may still not be economically viable but in the long run they may provide alternatives to the conventional sources of energy. The rate at which this substitution will occur will decide whether ultimately energy may become a factor that will limit economic growth in the world.

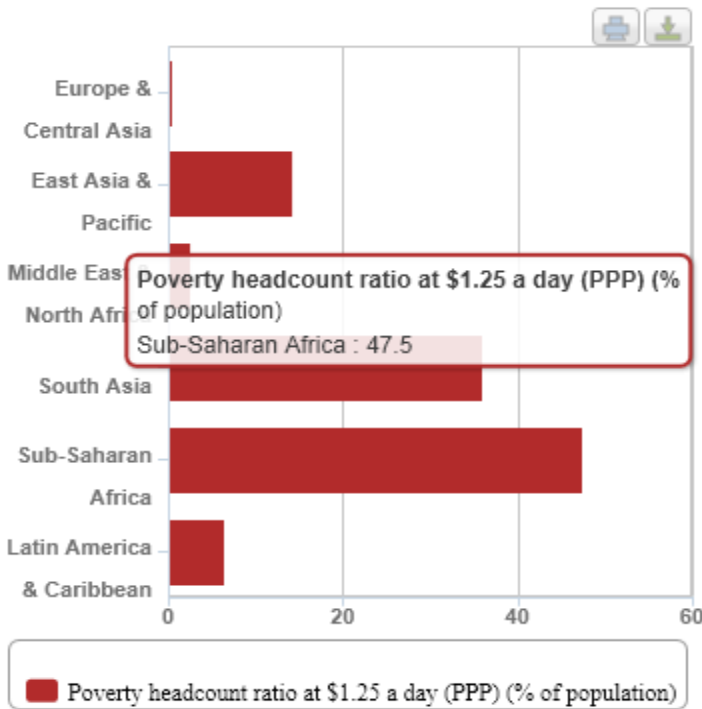
### **Towards sustainable consumption and economic growth**

Countless contributions have been made to the issue of sustainable development<sup>10</sup> and it would be pointless to repeat the main arguments. We would rather focus on

<sup>10</sup> There are over 100 definitions of sustainability and sustainable development, but the best known is the World Commission on Environment and Development's. This suggests that development is sustainable where it „meets the needs of the present without compromising the ability of future generations to meet their own needs.“

the following hypothesis: there will be no sustainable development without human consumption that will aim at preserving natural resources and be based on reason and respect of the laws of nature.

Critics will be quick to say that in the world where half of the population does not get enough to eat calls for reason in consumption may be considered sheer nonsense. They may be right in-so-far as the poor nations are concerned. Their consumption is still dramatically insufficient<sup>11</sup> so over-consumption is not among their major worries.



**Fig. 8.** Percentage of population living on less than \$1.25 (PPP- Purchasing Power Parity)  
 Source: World Bank: Working for the World Free of Poverty; 2012.

However, the picture is very different for the rich countries which, as we indicated earlier in this paper, consume a major part of world GDP. Most of the industrialized countries have come to the point where more consumption is not only unjustified but becomes counterproductive, if not plain harmful to humanity.

<sup>11</sup> Based on World Bank figures which are used for official global poverty statistics, the number of people in developing countries living below the international poverty line of \$1.25 per day fell from 1.82 billion to 1.37 billion between 1990 and 2005. For the subsequent three years to 2008, the Bank has offered a preliminary estimate that global poverty fell by a further 200 million to 1.2 billion. See: World Bank Poverty Indicators 2008; and World Bank: Working for the World Free of Poverty; 2012. This progress should be, however, treated with caution as it does not take into account inflation.

I. Illich had spoken of the counter-productivity of growth long time ago<sup>12</sup>. Similar concern has been expressed by others<sup>13</sup>. They all point to the same conclusion: the richer we become, the more we consume the less happy and satisfied we appear. This paradoxical observation has some much deeper causes that may first appear. They are of a very diverse nature and we are not going to cover them in great detail because they encompass many various disciplines: from economics and sociology to psychology, religion, morality and many others.

Consumption, and especially excessive, or as we call it indiscriminate consumption, has its cost. And we do not mean only *economic or explicit cost* but some *implicit costs* as well.

The *explicit* or obvious cost of human consumption is the price people pay to satisfy their basic needs: shelter, food, etc. We leave aside this issue since consumption that covers basic needs is a natural thing, economically and otherwise. This consumption is in the nature of things.

The problem arises when consumption becomes excessive. One may ask what exactly excessive consumption means and the answer may be ambiguous. For the purpose of simplicity we will define excessive consumption as the one that exceeds normally accepted standards. For example, excessive consumption of food would involve a normal person eating more than 2 500 -3 000 calories a day, unless he or she is a marathon runner or an adept of triathlon. Still, we quite honestly admit that it will not be easy to exactly define the term "excessive consumption".

Such excessive consumption regardless of its exact definition has, as we have already stated earlier, its definite cost. For excessive consumption of food this cost would involve first and foremost the costs of health care related to typical diseases caused by obesity: diabetics, high blood pressure, stroke etc. In the U.S., for instance, excessive consumption of unhealthy (junk) food is reflected in the number of overweight or outright obese people. It is estimated that some 75 percent of Americans are overweight or obese. Despite the fact the U.S. health care budget represents the main position of expenditure, much higher than defence budget<sup>14</sup> life expectancy in America is only slightly higher compared to some much poorer nations.

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<sup>12</sup> I. Illich (1926-2002), the Austrian-born catholic priest and philosopher, was the first to hammer out the term „counter productivity“. In his book: *Medical Nemesis*. Pantheon New York 1975, p.72 and subsequent, he speaks of counter productivity in the health care. He believed we needed convivial tools rather than machines and private car was a complete wastage of resources with its practical speed of only 6 km/h when all the total times lost while using it were accounted for.

<sup>13</sup> Ch. Siegel was quite blunt in his critique of the American consumption model. *"We often hear that we are reaching the limits of growth because of ecological constraints, but we rarely hear that we are also reaching the limits of human needs. .... Many Americans have become disillusioned with economic growth during the last few decades, not only because of the environmental problems it causes but also because the rising standards of living seem to bring diminishing satisfaction"*. The End of Economic Growth. Preservation Institute. Berkely, California 2006, p.5. See also A. Nadal): *Is De Growth (Zero Growth) Compatible with Capitalism? "The Global Realm"*. July 10, 2010; p.1. Nadal mainly repeats the arguments raised by G. Kallis, F. Schneider and J. Martinez Alier: *Sustainable De-Growth. The way forward*. "Journal of Cleaner Production", www.eco2bcn.es/index3.htm. S. Latouche, emeritus professor of the University of Paris South is the author of a number of best-selling books and studies, such as: *A bas le développement durable. Vive la décroissance conviviale*. Institut d'Études Économiques et Sociales pour la décroissance soutenable. Paris 2006; *Justice sans limites. Le défi de l'éthique dans une économie mondialisée*. Fayard , 2003, and others.

<sup>14</sup> See: *World Fattest Countries*. Forbes.com. Also see: Nancy S. Wellenon; Barbara Friedberg: *Causes and consequences of adult obesity: health, social and economic impact in the United States*. "Asia-Pacific Journal of Clinical Nutrition" Vol. II; December 2000, p.705-709. It is seldom mentioned that the U.S. spends **more** on health care than its defense budget (US\$ 793 billion or 23 per cent of the total budget against US\$ 689 billion or 20 per cent of the total budget). See: Office of Budget Management 2011. Summary tables S-3.

Health costs related to unhealthy life style are not the sole costs that excessive consumption of food brings about. Loss of self-esteem, feeling of rejection by peers, lack of motivation by obese or overweight persons should also be taken into account. In other words there are extensive *social costs* of excessive consumption of food that are borne by the whole society.

Rigour and objectivity lead one to emphasize that excessive consumption of food in all imaginable forms produces *definite economic advantages* for food producers and distributors, shops and restaurants and other businesses. Consequently an objective analysis should take this into consideration as well<sup>15</sup>. However, on the balance the negative aspects of an excessive consumption of food may outweigh the benefits.

Food and drink are only one aspect of the problem of excessive consumption in the developed world. Practically all areas of consumption may be affected by this phenomenon. Which family really needs 3 or 4 cars in their driveway or a youngster 20 pairs of jeans in her wardrobe? There must be some reasonable limitation to this *folie*.

This implies that people may reach a point where more consumption will not make them happier; it will make them quite unhappy. It is no wonder that more and more citizens in the most advanced countries start to reconsider their models of life, cut on useless items, live healthier lives. This trend notwithstanding an average American still produces much more domestic waste than an average Japanese or Chinese, let alone people in poorer countries.

The pressure from marketing people, TV commercials and other mass media messages is nonetheless too strong for many consumers to resist. This produces a vicious circle of excessive consumption or *the syndrome of buoyant consumerism*<sup>16</sup>. Some analysts refer to it as a syndrome of a compulsive shopping (“shop till you drop” syndrome).

The discussion so far has for the larger part had a purely theoretical character and one can legitimately ask what it has to do with the situation in this country, for instance. Poland and the other post-communist states alike have still to catch up with the per capita level of GDP (see data in table 2 below). Thus if Poland still lags behind the most advanced countries in terms of personal consumption there is nothing to worry about. We are immune from the disease of the post-industrial world.

There is nothing more misleading than that. Not only is Poland and other post-communist nations for that matter confronted with the syndrome of excessive consumption but in many areas this problem may actually be worse. The incidence of the so called civilization diseases, such as diabetics, hypertension, heart disease or stroke may in fact be in Poland equal, if not higher, than in developed countries. Ours is not the aim to describe these issues in great detail as they form the scope of interest of medical research. We only wish to signal them here.

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<sup>15</sup> Health professionals (doctors, obesity clinics, weight control programs, and the like) also benefit from the poor health record of the Americans. So do pharmaceutical companies who charge exorbitant prices for their weight control drugs which often prove completely in-effective.

<sup>16</sup> See: I. Chrzanowski: Post-communism and economic growth: an essay. Journal of Research in International Business and Management. Vol. 2(55). May 2012; pp.102-109

**Tab. 2.** GDP per capita in 10 richest countries in the world in 2011

Position	Country	Per capita GDP	Year
1.	Qatar	102,943	2011
2.	Luxembourg	80,119	2011
3.	Singapore	59,711	2011
4.	Norway	53,471	2011
5.	Hong Kong	49,137	2011
6.	United States	48,387	2011
7.	United Arab Emirates	48,158	2011
8.	Switzerland	43,370	2011
9.	Netherlands	42,183	2011
10.	Austria	41,822	2011
-	-	-	-
<b>44.</b>	<b>Poland</b>	20,334	2011

Source: International Monetary Fund

A casual look at a typical neighbourhood in a large Polish city will reveal a striking similarity with cities in North America, with bottle-necks on the roads, pollution, people who talk loudly on their cell phones in public places. Young Poles, Czechs or Russians behave in a very similar way to their Western peers. Signs of post-industrial social syndromes are omnipresent in those countries. The question arises of whether imitating the Western consumption models will do them more harm than good.

Returning to the main focus of this paper we should now try to answer the question of how the excessive or indiscriminate consumption will affect future economic growth. Needless to say such an answer is very difficult if not outright unlikely at this stage. Consumption is after all the main engine of economic growth as it was already mentioned earlier. Does that imply that if consumption decreases so will the economic growth in a country or geographical region or the entire world?

Reasonable, balanced and environment-friendly consumption needs not to slow down economic growth in general. Instead of burning fossil fuels we can use more of renewable energy. And likewise, instead of wolfing down tons of hamburgers or hot dogs we can eat more healthy foods. Instead of spending hours on congested highways we can use more public transit or ride high speed trains. It is not the consumption as such that may harm economic growth but its structure and character.

The newly enfranchised countries of Central and Eastern Europe have lessons to learn from the experience of the post-industrial nations who were in a similar situation 50-60 years ago before they fall into the same trap of consumerism. The question of how this should be done is the topic for another conference.

## Conclusions

There are two distinct aspects of relationship between consumption and economic growth. On one hand consumption is an undisputable factor of growth. More than

2/3 of GDP in the most developed countries arises from consumption. Consumption creates demand for goods and services that translates into increased production. At the same time increased consumption raises Governments' income from taxes levied on goods and services.

On the other hand, however, consumption that is excessive, unnecessary or simply unwarranted may become a factor that limits growth. Not only does it lead to depletion of natural resources but also because it bears definite social costs, such as health care, time lost due to illness and other negative effects. These costs may in fact exceed the benefits from such excessive consumption.

It should also be borne in mind that excessive or indiscriminate consumption leads to a decreasing level of consumer satisfaction whereby *more* does not necessarily translate into *better*. The works of Ch. Siegel, I. Illich or S. Latouche quoted in this paper clearly show that increased consumption does not necessarily make people happier.

A practical conclusion that follows from the discussion in this paper is that consumers in the recently enfranchised countries in Central and Eastern Europe may actually be falling into the trap of the syndrome of consumerism the same industrialized nations fell into 50-60 years ago. Perhaps time is right to reconsider the models of consumption in Poland and other countries of the region.

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