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Salaries and the logic of national income distribution in a market economy – described using a simple model

Introduction

A market economy is a system designed, at least in theory, to satisfy the needs of the community that has built it and which achieves this through economic processes carried out by thousands or millions of economic entities, including households. In the most general sense, its functioning involves people working to produce goods and services and earning income by selling what they have produced to other members of the community, with the money earned spent on the goods and services produced by others to contribute to their income.

The essence of that process can be captured in three words: produce, earn and spend. This leads to the continuous creation and transfer of income in cash flow processes – but it all needs to start with the production of specific goods (and services) because it is the sale of actual goods and services in the market that is the original source of income that is generated and transferred and, subsequently, distributed to create other income within such processes. The wealth of every community is the result of gathering something that has already been created and which forms property recognised as a resource, as well as something that it produces, i.e. tangible goods and services. This adds to the community, each in its own way, and that added value must be somehow distributed between the members of that community. Distribution is not only the key to the actual prosperity of direct producers: how the result of their work is distributed determines the satisfaction of their needs but also the functioning of the economy, its development, the condition

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of the state as a set of institutions organising society and, last but not least, the positioning of the country in the international community of economies.

The purpose of this paper is to show the logic of the basic interdependencies in the income creation process based on a simple model – a classic metaphor which the author believes presents the logic of national income distribution better than the traditionally used macroeconomic equations or more complex econometric models. The paper also depicts the position of Poland compared to other countries in terms of the effects of such distribution.

MONEY AS AN INCOME DISTRIBUTION TOOL

The basic tool used in this process of distributing produced goods and services is money, a special economic instrument: we receive it as income and, as we make purchases, we pass the income to others to generate further income; as a result, money changes hands and circulates in society in a unique network of mutual interrelated income and expenses. One can say that money is just a tool used to achieve specific economic effects; due to the properties it has been given, money becomes in fact "a right to purchase goods and services" – this synthetic definition captures all the functions of money available in the literature but, more importantly, it rids money of the illusion that it should have its own internal value, as believed by supporters of the notion of returning to the gold standard or even metallic money, as used centuries ago. The tool circulates as currency in circulation; in return for having given something to society (consumer goods, investment goods or services), we receive monetary units as rights to purchase a part of what society has produced and we keep passing on those rights in return for the goods and services we purchase, with those rights stored in banks – the basic institutions in the financial intermediation system – and passed on within that system as tools to create capital but also to realise postponed consumption.

Efficient functioning of that system requires good rules of distributing national income and shaping wages, as well as other mechanisms to provide the entities that form the economy with an adequate quantity of rights to purchase goods and services – a quantity that permits "clearing the market," i.e. generating enough purchasing power to absorb what has been produced.

However, capitalist economy has a certain special, one could say inherent, property of being a system of overproduction – it is a primary, intrinsic feature of capitalism. As will be demonstrated later, overproduction has a primary function in the production and distribution cycle because the cost of remunerating direct manufacturers is only a portion of the total value of the produced goods, as a result of which they may purchase only a part of what they have made. Consequently, in order for overproduction to ultimately find buyers, mechanisms that energise

the economy and integrate it with the state emerge, a natural process, within the inevitable logic of growth.

The functioning of an economy within specific structures is not just an outcome of objective laws, and we doubt whether such laws even remain constant in the same way as the laws of nature[2]. This is first and foremost the actions of people, and one must bear in mind that the actions of people – entrepreneurs, economic policy makers and opinion-makers – are influenced by the ideology born in the 1970s, colloquially referred to as neoliberalism, brought by the "New Economy", derived from a concept that arose as an antithesis to the Keynesian "demand-side economics" as the "supply side economics", just like every idea created to benefit specific interests. It is an economic idea that postulates focusing on those who generate supply and as such it proposes actions to create favourable conditions for entrepreneurs and employers. And since they are interested primarily in profit maximisation, it was believed that conditions and stimuli must be created to reduce all costs, including labour costs and of course taxes; after all, the lower the costs the higher the profits, and this was supposed to motivate them and thus foster their growth.

This is logical and reasonable, but only seemingly as it fails to account for the important characteristic of the economy, which is the internal conflict between the goals and interests at the micro scale and what we need and what is essential at the general macro level. It is primarily the conflict between the interests of a profit-oriented entrepreneur and the interests of their employees. But this is not just the issue of the interests of employees; after all, it is not true that the interests of entrepreneurs, capitalists, businesses and companies always serves the public and society or that profit maximisation is always a force driving the "invisible hand" to make it work for the common good – this is not the case especially where an entrepreneur buys out its competitors and monopolises the market; if this happens, the invisible hand kills the essence of the market, i.e. free competition.

This conflict gains significance especially when entrepreneurs as a community pursue they profit maximisation goals by minimising labour costs, whereas the economy needs demand, and demand is generated by the income of the employees. This leads to the paradoxical conclusion that the more money employees make at the expense of single entrepreneurs by reducing their profits the better for the whole community of entrepreneurs and for the economy as a whole. As a result, what is unfavourable for a single entrepreneur can be beneficial for entrepreneurs as a community. It is a fact that global demand has a special meaning during a crisis – J. K. Galbraith made the following comment in his last book, written

[2] Besides, it has been observed that in economics some laws are variable because the environment in which economic entities function keeps evolving and as a result certain rules and laws become relative; this leads some to doubt whether economics is even a science.

in 2004 when he was 96, two years before his death: "The one wholly reliable remedy for recession is a solid flow of consumer demand" (Galbraith, 2005, p. 78). This additionally generated flow of consumer demand is expected to reduce the surplus of goods above the current purchasing capacity (the condition of the labour market, the level of wages) and the desire to shop (propensity to save) that develops during a crisis, and thus clear the market. But it may become "reliable" only if wages, i.e. labour costs, rise – with a loss on some of the surplus that represents entrepreneurs' profit. In this context, surplus is simply a tangible profit of the entrepreneur taking the form of the goods manufactured by employees.

Thus the final result depends on the distribution at the level of enterprises and on the mechanisms for distributing this surplus as they ultimately determine the dynamic and growth prospects of the economy. The distribution must lead to a dynamic balance between the flows of cash and the flows of manufactured goods and services. Moreover, money and other tools of the financial market must be matched to one another and to the condition of the economy. So, let us explore those mechanisms to an extent permitted by a simple classic model.

The Great Bakery metaphor

The essence of the basic structural system-rooted property of economy (arising from the nature of capitalism) is permanent production surplus in relation to the profit generated by direct manufacturers of market goods, which can be presented by the example of the simplest model of economy, a metaphor similar to the illustration models used as early as in the classic economics development era: we will compare economy to a Great Bakery[3]. We will show how this metaphor simplifies the depiction of complex economic processes and we will use it as an impulse, a pretext to explore various macroeconomic interdependencies and correlations in Poland and other countries.

Let us assume that economy is a Great Bakery owned by Baker, a capitalist making 1000 loaves of bread costing 1 monetary unit each – let us say a dollar. The bread produced by the Bakery is a kind of synthetic aggregate equivalent of the complex set of goods and services produced in the actual economy, and the figure of the Baker can be interpreted as a "collective figure", i.e. a community of entrepreneurs. As such, our model, just like every model, reflects the reality; disaggregation of those terms would on the one hand bring the model closer to reality, on the other hand it would complicate it rapidly as it would require taking

[3] Some time after writing this paper and submitting it for publication the author noticed that the same metaphor was also used by Prof. Kazimierz Łaski (2015, p. 37). Perhaps read a long time ago, it still resides in the subconscious. Even when Prof. Łaski was still alive, I noticed we had similar thoughts on economy.

into account a rocketing number of interdependencies and correlations. So in order to avoid problems arising from excessive complications, we are using this extremely simplified model.

Our Baker has 500 employees; let us assume that the production process takes place within a process line from the sowing of grains and manufacturing of flour to baking and selling of bakery products, along with the manufacturing of machines and tools within simple reproduction – a closed and self-sufficient stable system. The value of the manufactured goods is the GDP of our small metaphorical country, and of course the GDP = 1000 dollars – we calculate everything on a monthly basis. The cost of wages is naturally a part of that amount, let us say that they receive wages of 1 dollar each, and the total wages equal the production costs: $Y = 500$ dollars; the wages represent a half of the (monthly) GDP of our model country.

Thus employees receive an income amount for which they buy (on average, as we allow a certain diversity of income) 1 loaf of bread required to feed the family – as A. Smith said (2003, p. 95), "the product of labour is a natural reward for it – a payment for labour" with the money received as wages making it possible to buy that product. Once the costs of labour are subtracted, we have a production surplus of 500 loaves, which is the Baker's profit: $P = 500$ – one can say that the Bakery owner shares what his employees have produced with them fifty-fifty.

The system is stable, static but it can evolve. So let us assume that the Baker has decided to reduce the costs and as a result aggregate wages dropped to 300 dollars and now constitute 30% of the GDP. This could have happened with the employment level remaining unchanged but with the unit pay reduced instead. Consequently, five hundred people will buy a total of only 300 loaves for their reduced wages, which will cause the quality of their lives to deteriorate. Another option is that efficiency could have been improved, for example 300 people make the same number of loaves due to better organisation. What would happen in this case is something that everyone interprets as a positive phenomenon – work efficiency has increased. And so wages could remain the same, labour cost savings have been achieved but still 200 people were made unemployed. As can be easily noticed, such changes in the process of producing basic consumer goods (bread in this case) drive changes across the whole system: it is important what happens to those people, where they can find employment – perhaps new jobs need to be created in services, maybe in the public sector (after all, the state is a kind of service sector too) or in other branches of the economy. In the Bakery itself those changes, whatever the reason for them and mechanisms, come down to labour cost reduction. As a result, the Bakery owner's profit increased, which means that a surplus of 700 loaves of bread was produced as his tangible profit, which forced changes in the environment of the Bakery. This is illustrated in Figure 1.

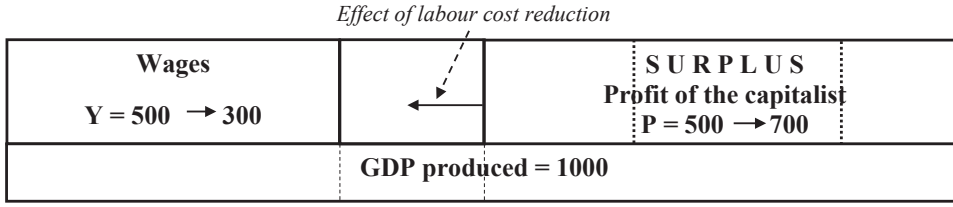

Figure 1. Basic division structure in capitalism

Source: own study.

Our simple model illustrates the first and trivial conclusion that in capitalism employees are unable to purchase everything they have produced because labour costs constitute only a part of the generated GDP value; the purchasing power of society (other than capitalists), i.e. aggregate wages, must be lower than the value of the product that society produced. This is a structural property, meaning it is an outcome of the fundamental structure of national income distribution.

Thus a certain permanent producer surplus and a concurrent deficient demand on the part of employees (direct manufacturers) is a structural feature of the capitalist economy – as already discovered in classic economics. In the first approach we have a consumer market where it is "easy to produce and hard to sell". The situation means that additional market clearing mechanisms must emerge.

What part of GDP do employees receive?

Does this "fifty–fifty" or "one third–two thirds" distribution to the disadvantage of employees presented in our model have anything to do with the reality? Is it not an exaggeration that so little is left for the employees? Let us explore how it occurs worldwide at a macro level to see what part of GDP employees in various countries received in the 1997–2018 period.

The ratio of macroeconomic employment-related costs to GDP depends on a number of factors differing country by country, which is why certain data may be poorly comparable. For instance, attention may be drawn to Ireland as its ratio dropped drastically in 2015 as a result of changes in the calculation methodology and the consequent overstatement of GDP value, which resulted in the value of the denominator increasing more than that of the numerator[4], thus causing a questionable drop in the value of the ratio.

[4] This information (telephone consultation) was received from Polish Central Statistical Office.

Table 1. Share of employment-related costs in GDP in selected countries and years

No.	1997		PL 100	2007		PL 100	2012		PL 100	2017		PL 100	2018		PL 100
1	Switzerland	62.4	141	Switzerland	62.2	177	Switzerland	61.5	170	Switzerland	59.3	154	Switzerland	58.5	149
2	USA	60.3	136	USA	56.8	161	USA	55.4	153	USA	53.5	139	USA (2017)	53.4	136
3	Sweden	58.5	132	UK	54.5	155	Denmark	55.3	153	France	52.2	135	Germany	52.9	135
4	Japan	56.7	128	Sweden	54.4	155	Ukraine	54.0	150	Denmark	51.8	134	Denmark	52.4	134
5	UK	54.4	123	Denmark	54.0	153	UK	53.9	149	Germany	50.9	132	France	52.4	134
6	Denmark	53.1	120	France	51.6	147	Sweden	53.7	149	Canada	50.5	131	Canada	50.5	129
7	Canada	53	120	Japan	51.6	147	France	53.4	148	Luxembourg	50.2	130	Japan	50.4	129
8	Germany	52.7	119	Slovenia	51.1	145	Belgium	52.4	145	Japan	50.0	130	Luxembourg	50.2	128
9	France	51.9	117	Canada	51.0	145	Slovenia	52.4	145	Belgium	49.4	128	Slovenia	49.9	127
10	Belgium	50.6	114	Belgium	50.5	143	Canada	52.3	145	Slovenia	49.3	128	Belgium	49.6	127
11	Austria	50.5	114	Netherlands	49.5	141	Japan	52.0	144	UK	49.1	127	UK	49.4	126
12	Czech Republic	50.4	114	Ukraine	49.4	140	Finland	51.8	143	Belarus	48.4	125	Estonia	48.5	124
13	Netherlands	50	113	Latvia	49	139	Netherlands	51.6	143	Estonia	48.2	125	Belarus	48.0	122
14	Australia	49.9	113	Portugal	49	139	Germany	51.6	143	Netherlands	47.9	124	Austria	47.7	122
15	Finland	49.5	112	Germany	48.8	139	Russia	50.4	140	South Africa	47.7	124	Netherlands	47.7	122
16	South Korea	47.7	108	Austria	48.2	137	Austria	50.2	139	Austria	47.5	123	South Africa	47.6	121
17	Norway	47.1	107	Australia	47.9	136	Belarus	50.2	139	Norway	47.5	123	Sweden	47.5	121
18	Spain	46.4	105	Belarus	47.8	136	Australia	48.1	133	Russia	47.4	123	Russia	47.4	121
19	New Zealand	44.5	101	Estonia	47.7	136	Portugal	48.0	133	Australia	47.3	123	Latvia	47.3	121
20	Poland	44.2	100	Finland	47.5	135	Estonia	47.1	130	Sweden	47.1	122	Australia	47.1	120
21	Portugal	43.6	99	Hungary	46.8	133	Luxembourg	46.1	128	Finland	46.9	122	Spain	47.1	120

22	Ireland	43.3	98	Spain	46.5	132	South Africa	45.9	127	Spain	46.9	122	Finland	46.8	119
23	Italy	41.3	93	Luxembourg	45.7	130	Spain	45.8	127	Latvia	46.6	121	Norway	46.6	119
24	Greece	34	77	South Korea	45.6	130	South Korea	45.8	127	South Korea	44.8	116	Portugal	44.9	115
25				South Africa	45.5	129	New Zealand	45.5	126	Portugal	44.3	115	South Korea	44.8	114
26				Cyprus	45	128	Cyprus	45.4	126	Lithuania	43.8	113	Lithuania	44.8	114
27				New Zealand	44.7	127	Hungary	45.1	125	Cyprus	43.6	113	Ukraine	43.8	112
28				Russia	44.1	125	Norway	44.8	124	Ukraine	43.6	113	Hungary	43.7	111
29				Lithuania	43	122	Malta	44.6	124	Bulgaria	43.2	112	Cyprus	43.2	110
30				Malta	43	122	Czech Republic	43.1	119	Hungary	43.0	111	Bulgaria	43.1	110
31				Ireland	42.8	122	Italy	42.7	118	New Zealand	42.9	111	Czech Republic	43.0	110
32				Norway	42.8	122	Ireland	42.1	117	Czech Republic	41.4	107	New Zealand	42.9	109
33				Czech Republic	42.7	121	Latvia	40.7	113	Malta	41.1	106	Slovakia	41.1	105
34				Romania	42.7	121	Lithuania	38.9	108	Slovakia	40.5	105	Malta	40.4	103
35				Italy	41.1	117	Bulgaria	37.1	103	Italy	39.7	103	Italy	40.2	103
36				Greece	36.4	103	Slovakia	37.0	102	Poland	38.6	100	Romania	39.9	102
37				Slovakia	36.4	103	Romania	36.6	101	Romania	36.0	93	Poland	39.2	100
38				Poland	35.2	100	Poland	36.1	100	Greece	33.6	87	Greece	33.4	85
39				Bulgaria	34.5	98	Greece	33.0	91	Ireland	29.4	76	Ireland	28.8	73

Note: Data for 1997 were much poorer in terms of the number of countries than data for subsequent years.

Source: own study based on data from Polish Central Statistical Office, Polish Statistical Yearbooks (1998–2019), chapter "International Comparisons" (ratios for certain countries and certain years pertain to a year other than stated in the table heading).

Still, we have a measure that shows significant differences between countries and the trends in changes as to what part of GDP is received by society as pay for their work. As we can see, in 1997 the 44.2% ratio for Poland was comparable to ratios for a number of developed countries in Western Europe, where the values in the leading countries (assuming that the value for Poland was 100) were only some 10–20 percent higher. Even though it depends on a number of factors, not just on the distribution at the level of enterprises, but also on the size of unemployment and on the forms of employment[5], the structural changes taking place in Poland over the 10 year period caused a significant change and Poland dropped in the expanded ranking to the penultimate position, with a ratio of 35.2%. This was a drop by almost 10 percentage points, and in the leading countries it was half as high – so, in Poland only a little over 1/3 of GDP[6] was given back to people versus a half more in these other countries. In 2017, Poland rose in the ranking a little, by two positions, with the ratio increasing (by 2.5 percentage points) but that being still much higher (by one third) in the leading countries. As can be seen, Switzerland is a special exception that has no equals. It is a place where the largest part of GDP is given back to people, even up to 60%. The United States usually comes second, with a ratio of over 50% (in 1997 the ratio exceeded 60% but it gradually dropped to reach 53.5%)[7]. Its high value means that the part of society

[5] Unemployment in Poland in 1997 and 2007 differed only slightly, it increased from about 11.5% to 12.7% but in the meantime it reached 19.9% in 2003; in contrast, in 2012 and 2017, it was 12.8% and 7.3% respectively, which was a substantial drop. But the value of the ratio also depends on the form of employment. In Poland, contracts other than employment contracts became ever more common, especially self-employment, where the employee is no longer an employee but a "business" signing a B2B contract with the company that is an employer. According to the information from GUS (Polish Central Statistical Office), almost 3 million people in Poland were self-employed at the end of 2006, which was almost 19% of all the employed, and the ratio remains at a level close to 20%. This means that 1 in 5 people who are actually employees are not registered as employed (although they employ themselves), which has not only material fiscal consequences (they pay a 19% CIT and low social security) but also reduces the share of employment-related costs. Its drop for Poland, by almost 10 percentage points, was the greatest negative change in this group of countries (data from Polish Central Statistical Office).

[6] Curiously enough, if we take into account the consumption of households, it constituted about 60% of GDP. In the period from 1995, it was the highest (in relation to GDP) in 2002 (65.6%), in the 2006–2013 period, it was about 60%, and it dropped in subsequent years and stabilised at 57.7% in the 2015–2016 period, only to drop gradually to 57.3% in 2018, despite the family support programme financed from the budget (data from Polish Central Statistical Office).

[7] This is not far from the value of that ratio in the years before World War II. In his fundamental paper, M. Kalecki shows that the share of wages in the gross income of the private sector in the United States between 1929 and 1941 was 51 to 57.1%, and it was the highest in 1932 and 1933 (57.0% and 57.1% respectively); the value 54% dominated in that period (Cf. M. Kalecki, *Teoria dynamiki gospodarczej,* PWN, Warsaw 1986; published in the first original version as *Theory of Economic Dynamics: An Essay on Cyclical and Long-Run Changes in Capitalist Economy*, Allen and Inwin, London 1954, p. 47).

which we consider as the employed class is more fully included in the market mechanisms – either directly, as employees of the market sector, or indirectly, when they are compensated through the fiscal redistribution system.

Notably, such a process of value reduction was observed for that ratio in a number of countries. In Poland, it was only partially a consequence of the evolutionary changes arising in the distribution of wages as a result of the transition policy. Table 2 presents the basic parameters for describing the distribution of wages based on the tables from the Statistical Yearbooks of Polish Central Statistical Office presenting the percentage share of the employed in the pay ranges on a biennial basis.

Table 2. Parameters of the distribution of wages in Poland

Year	Minimum wages		below average	mean	median		mode		9th decile		
	PLN	% of the mean value	%	PLN	PLN	% of the mean value	PLN	% of the mean value	PLN	% of the mean value	% of the mode
1999	700	41.2	59.4	1697	1487	87.6	1155	68.1	2967	174.8	256.9
2001	760	34.3	65.5	2217	1829	82.5	1441	65.0	3684	166.2	255.7
2002	760	34.1	64.7	2230	1827	81.9	1397	62.7	3761	168.7	269.1
2004	824	34.8	65.5	2369	1911	80.7	1466	61.9	3969	167.6	270.8
2006	899	33.9	65.7	2654	2130	80.2	1592	60.0	4521	170.3	283.9
2008	1126	34.8	65.4	3232	2642	81.7	2086	64.5	5394	166.9	258.6
2010	1317	37.2	64.7	3544	2906	82.0	2008	56.7	5890	166.2	293.3
2012	1500	38.5	66.2	3896	3113	79.9	2170	55.7	6595	169.3	303.8
2014	1680	40.9	65.9	4108	3295	80.2	1927	46.9	6969	169.7	361.6
2016	1850	42.6	66.3	4347	3524	81.1	2056	47.3	7234	166.4	351.9
2018	2100	42.0	66.0	5004	4093	81.8	2378	47.5	8256	165.0	347.2
Increase	**3.00**	**1.02**	**1.11**	**2.95**	**2.75**	**0.93**	**2.06**	**0.70**	**2.78**	**0.94**	**1.35**

Source: own study based on data from Polish Central Statistical Office, Polish Statistical Yearbooks (1998–2019), tables of distribution ranges "The employed by gross remuneration," item Total.

The last row presents increase rates for particular values. The visible general tendency is that the distance between the ninth decile and the mode is increasing – it was two and a half times higher at the turn of the century, and over the next years the difference continued to grow to become almost three and a half times higher in the 2014–2016 period and in 2018 respectively, whereas the distance to the mean value basically stabilised – the 9th decile was higher than the mean value by 66 to 70 percent. The difference between the last decile and the mean value

to the advantage of the former is rather small, just sixty-something percent, so if we wanted to single out those whom we consider the richest, we would have to study the last centile rather than the decile. However, the statistical data provided by GUS are not detailed enough to determine its value. Still, it should be noted that in the last open range of 280+ percent above the mean value, 2.4% people were employed in 2001, and in the next years slightly more; in the 2012–2014 period the share of that group stabilised at 2.8% and then dropped to 2.6% in 2018. During that time, the nominal GDP increased 3.14 times so the wages growth rate was much slower for the mean value, even slower for the median and, obviously, much slower (more than twice as slow) for the mode. It should be noted that the minimum wages growth still failed to keep up with the GDP growth, as the wages increased by a factor of three. The fourth column in the table shows that after 2000 about 66% of people had wages below the mean value, with a slight growth tendency (regression coefficient for the whole sequence of data $\beta_1 = 0.37$, after 2000 $\beta_1 = 0.11$).

The values of the above measures result from the gradual changes in the distribution of wages and the growing inequalities. It turns out that the highest percentage share in 2018 consisted of employees making 40–50% of the average wages (PLN 1739 to PLN 2173) – at 16.2%, while two years earlier the value was 17.4% of the employed; the number of employees from the next range (50–60% of the average wages) was much lower, at 10.9 % and 11% of the employed in 2018 and in 2016 respectively. Such a distribution resulted from the fact that a major part of the employed "concentrated" within the range of 40–50% of the mean value, with concurrent drastic drop in the number of people making less than 40% of the average wages, which was the effect of an increase in minimum wages (the wages entered a range above 40% of the mean value); a substantial number of people were paid below half of the mean value, and the mode of wages gradually departed (downwards) from the mean value, which indicated growing inequalities, poverty stabilised, the earnings of the majority were characterised by clear stagnation, and this tendency was confirmed by the fact that the median also followed a relative decreasing trend and consequently 65.5% and over 66% in 2001 and in 2018 respectively received wages below the mean value, which is characteristic of highly right-skewed asymmetrical distribution accompanied by steady but consistent growth in symmetry. This is illustrated in Figure 2.

The relations between the mean values and measures of location reflect a gradual increase of inequalities in the area of wages. Significantly, this contradicts the changes in the Gini coefficient because, according to Eurostat data[8], its value for Poland continued to gradually decrease from 31.4 to 29.8 over 2009–2016 and to 28.5 in 2019.

[8] http://appsso.eurostat.ec.europa.eu/nui/show.do?lang=en&dataset=ilc_di12 (10.06.2020).

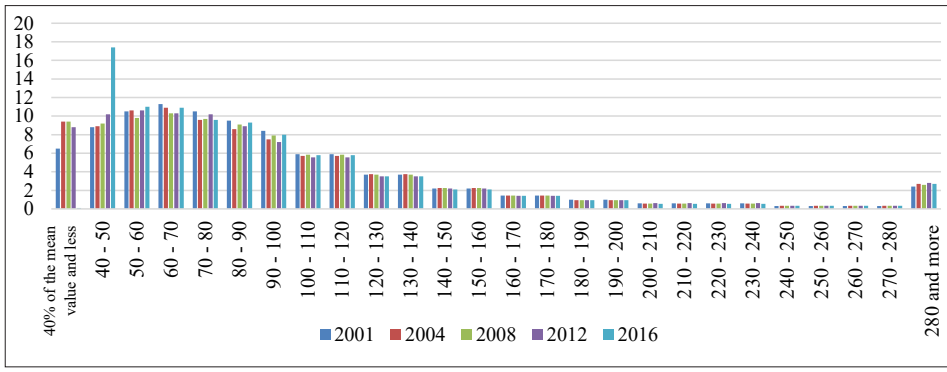

Figure 2. Distribution of wages in the economy in the 2001–2016 period

Source: own study based on data from Polish Central Statistical Office, Polish Statistical Yearbooks (2002–2017), tables "The employed by gross remuneration" – the data specify the percentage of all the people employed in the economy.

Consequently, macroeconomic data confirm that the 50% or 30% share of labour costs in GDP adopted in our model is not detached from reality. A certain level of wage costs shapes the value of the original surplus remaining with the enterprise: the employees spend their wages to buy 500 or 300 loaves, while 500 or 700 loaves respectively remain with the Bakery as product surplus. But the Baker makes an actual profit if that surplus is sold, therefore it must be deposited somewhere, which means there must be mechanisms in place to distribute it in society, whether within or outside of the specific economy, and this leads to certain consequences.

There are *three directions* for changing the surplus to money, i.e. to monetary profit:

- first, shopping done by those employed in sectors that produce means of production, in investment sectors,
- second, shopping done by those employed in the public sector,
- third, sales in foreign markets.

Thus, the surplus is divided into three parts – in Figure 1, the division is marked with a dotted line. As has already been mentioned, the surplus first takes the form of tangible goods (which is why we termed it the "primary surplus"), that is the products that the manufacturer has to sell, in this case loaves of bread. Things would differ in the case of services. The labour cost is of course always a part of the general value (price), and if our metaphorical economy delivered certain services instead of bread, such as hairdressing services, the wages of the direct service providers could also constitute 50% of the income earned by doing the customer's hair, but the owner of the Great Hair Salon, which would replace the Great Bakery, would receive directly the monetary surplus representing his profit. There is no surplus product in the case of services, while the Baker owning

the Great Bakery is in a difficult corner, as he must transform the product surplus into money by selling it. As we shall see, these *three directions* lead to significant economic consequences, because they imply the emergence of a specific economic structure.

Surplus as a driver of growth

Tangible surplus can be passed in the first instance (the order is of course a matter of agreement) to those who will contribute to economic growth by providing new production tools to improve performance and product quality – they will implement investments. In this way the surplus will drive extended reproduction, i.e. development. So, the model needs to be expanded to include two elements: manufacturers of investment goods and a system for transferring funding to them, which is a system for financing investments and purchases of investment goods. Characteristically, in the socialist planned economy those branches of economy that produced investment goods were referred to as the 1st Division of economy; this shows that production of investment goods was a priority, while manufacture of consumer goods was pushed to the background and represented branches assigned to the 2nd Division – they were considered a cost, or even as a burden for economic development, which disrupted the logic connected with the primary goal of economic processes, that is the satisfaction of various consumption needs of society.

The need to take into account the financing system means that first cash, termed as savings (*S*), needs to be generated and then transferred to the economy, which means those savings must be activated or, in other words, invested, lent, transformed to investments (*I*) through a financial intermediation system. As a result, the part of the community that is employed in the investment sector, i.e. the sector producing not the means of consumption "baked" in the Great Bakery but the means of production, will be able to purchase a part of the surplus consisting of the 500 (or 700) loaves.

Investing is an objective need of every economy that is intended to grow. Therefore a question arises: who is to generate the funds for the growth, where should cash flow *S*, which is expected to be converted to *I*, be supposed to come from? In the nationalised socialist economy this was the role of the state. The state paid basically only net income to employees of state-owned companies, i.e. income without taxes[9] and practically without savings[10], with cash flows managed

[9] Strictly speaking, without direct taxation, income tax did not exist but there were various turnover taxes, i.e. indirect income taxes, because it was not possible to survive completely without taxes after all.

[10] Of course, people accumulate savings, there were even campaigns encouraging them to do so, but the wages of many were enough only to cover the basic costs of living so they could not afford to

through a central plan at the macro level. In contrast, our Great Bakery model logically shows that it would have to be the capitalist himself to first provide the purchasing power for employees of the businesses functioning in the environment of the Great Bakery, and so our model needs to be expanded to include producers of investment resources, and secondly (which is going to be discussed in the next chapter) to supply funds to the state by paying taxes. This cash flow is indispensable for the surplus of the manufactured product remaining with the capitalist to be purchased.

Therefore, the model needs to become dynamic because this money has to be generated in the previous period: let us assume that the Baker sold all the production in the month before, giving him an income of 1000 dollars from which he paid wages to his employees, thanks to which they bought 500 (or 300) loaves of bread, while for the Baker to sell the remaining loaves funds need to be transferred from his savings (and, by extension, as the taxes he pays). In this way, many models analysing the processes of functioning and growth of a capitalist economy assume that savings are generated from the profits of the capitalist – this is the logic of those models[11]. For Keynes, savings are simply the difference between income and consumption expenses, the issue of whether we treat the purchase of a house or a car as consumption or investment expenses being a matter of convention. It all depends on "where we draw the line between the consumer and the entrepreneur" (Keynes, 1985, p. 88); similar ideas were expressed by K. Łaski (2015).

Today we know, of course, that in a real economy the relationship between investments and savings is neither simple nor direct; Keynes demonstrated that those notions, as macroeconomic flows, are determined primarily by the propensity to save and the propensity to invest, which depend on a number of factors; at any rate, it is not true that savings determine investments but rather on the contrary – investments are primary in nature, their level defines the level of income, with a certain propensity to save. However, it is a complex process, contingent also (or perhaps primarily) on what entities generate the funds that are contributed to the financial system. At first glance, our Great Bakery model suggests that the capitalist should provide the funds to finance development from his own resources, while the banking (financial) system will act as an agent if the revenue earned in the previous period has been deposited therewith or is reinvested. Of course, its employees could also gather savings but the macroeconomic consequences depend on how the income earned at the level of the enterprise is distributed. With an income of 500 (or 300) dollars, their savings

put money aside and build their wealth through savings; besides, there was no trust in Polish currency, and no other financial assets (other than black market dollar) were available; savings as such did not serve the functions they have in a market economy because the role of banks was limited, especially since money did not have the same functions it has in a market economy.

[11] For instance the model by Kalecki (cf. Kalecki, 1986, p. 63 et seq.).

would directly weaken the economy, which could affect the propensity to save. As M. Levinson (1992, p. 69) notes, "a smart employer is willing to pay more than the equilibrium wages suggest (...), he believes that paying his workers above the market equilibrium wages is fully justified". For instance, Henry Ford decided in 1914 to pay his workers a then unprecedented daily rate of 5 dollars (Levinson, 1992, p. 67). In this way Ford's worker could buy not only a Ford but also save money. The Baker in our model could pay his employees not 500 but 600 dollars and then, having satisfied his needs, he would have saved 100 and contributed to the financial system, as illustrated in Figure 3. Such distribution would have a specific macroeconomic effect on the distribution structure of national income, i.e. on the manufactured product and the related income stream: savings would also be generated by households.

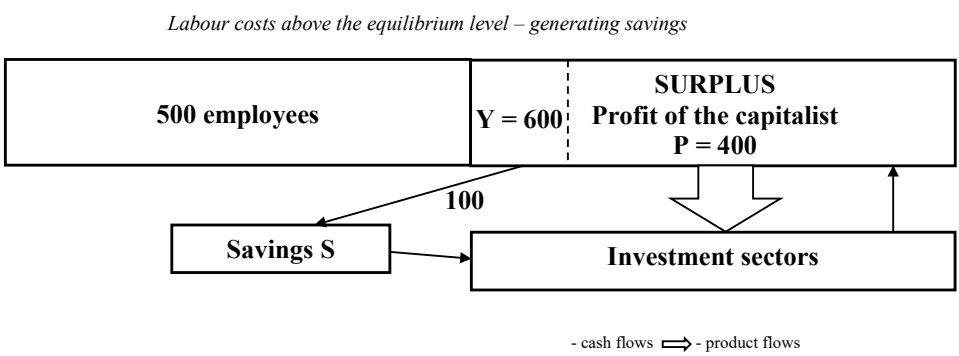

Figure 3. Savings as a financial surplus of employees

Source: own study.

Therefore, if, as suggested by Levinson, a major part of the funds is passed on to employees, then at least for some of them the income may exceed their consumption needs and so a propensity to save will emerge in households while at the same time demand will be satisfied in accordance with their consumption needs. The increase in the propensity to save is non-linear in relation to income growth; the increase in the risk-taking propensity, i.e. readiness to make risky investments, is non-linear, too. Hence the significance of income diversification – because this builds a group of richer people in society who are willing to risk some of their money for investment purposes without this affecting their financial situation. They make it possible to create the funds used to finance various risky undertakings, some of which are successful and drive economic development.

Still, it must be borne in mind that too large an inequality is highly harmful to the system because it results in too large a portion of the general income pool being held by a privileged group, which increases the macroeconomic savings rate

but also results in a purchasing power deficit for the rest. Such income allocation impedes development due to insufficient global demand and, consequently, leads to economic stagnation. In such a case, any mechanisms transferring a part of the purchasing power to households instantly stimulate costs and, by extension, the economy and economic growth[12].

From the point of view of households, saving has a special individual value – it allows households to build wealth in the form of resources set aside. But it also has a macroeconomic value: it will co-create the M2 monetary aggregate as something that I have termed the "capital leg of the economy"[13] – because this resource of deposited savings is used to finance loans (multiplied by the money multiplier by commercial banks), other investments disclosed in the assets of balance sheets of banks and acquisitions in stock markets, whether secondary (stock exchange) or primary – stock issues placed by banks and stockbroking firms. It is thanks to the financial system that the passively accumulated money is activated to form the ultimate income of the employees of the companies producing investment goods.

In Poland, the savings of households deposited in banks represent almost 70% of total deposits, while enterprises own slightly above 20%; the remainder, about 10% of deposits, are funds of other entities, with 4% belonging to other financial institutions and 3% provided by various local government institutions. This is how it works as far as supplying funds to the financial system, but when it comes to the amounts owed to banks, which also partially means investment loans, the entity structure is similar with a little variation: less than 60% belongs to households and 30% to enterprises; this means that households save only a little (10 percentage points) more than they absorb in the form of loans, while enterprises take out slightly more loans than they save. This is illustrated in Figure 4.

As we can see, the majority of deposits in the current pattern of national income distribution are generated by households, the figures for enterprises being three times lower. At the same time, households lead in the money owed, though the figures here are not three times but only twice as high as for enterprises. This shows that households may collectively save more than enterprises but as a community they highly rely on loans, which means that many of them have little in the way of resources of their own. Enterprises, on the other hand, despite having less deposits than borrowings with banks, are much less tied to the banking system, which might suggest that they rely more on the capital market instruments traded in the stock exchange for capital. However, the Polish stock exchange is weak, which is why it can be argued that the Polish financial system as a whole has low potential for financing economic development.

[12] This was partially the effect of Poland's "Family 500+" programme.

[13] As I once stated, the economy stands on two "legs" of the monetary aggregate, a form of pillars: the "transaction leg" in the form of circulating money that forms the M1 aggregate, and the "capital leg," which co-creates aggregate M2 together with M1 (cf. Żyżyński, 2014).

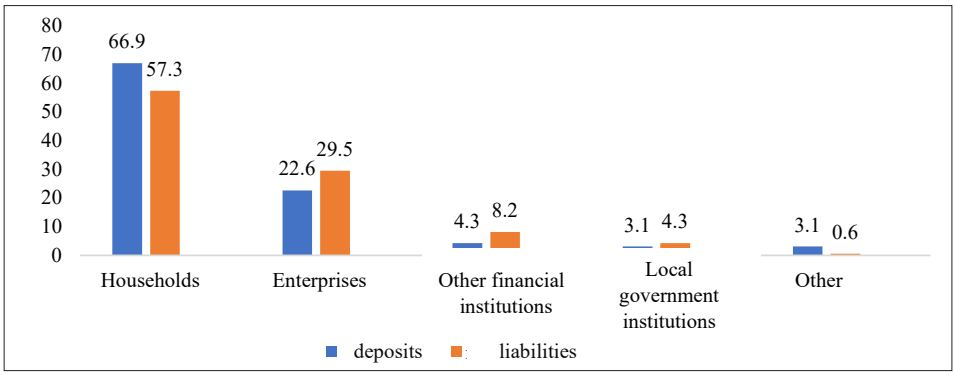

Figure 4. Deposits and liabilities of commercial banks in Poland as a percentage of the total figures (July 2019)

Source: own study based on data from the National Bank of Poland (NBP).

As I have shown in the work cited (Żyżyński, 2014, Figure 2), the savings resource is slim due to the halving of the M2 monetary aggregate in 1990 – by those savings, the real value of which was depreciated by inflation, and no attempts were made to compensate for it, which should have been done in order to rebuild and then properly shape the monetary capital resource: it can be said that the "capital leg" of the economy was cut off at the start of the new economic system, and it is being recreated slowly and gradually.

As can be seen, deposits constitute a substantial part of the pecuniary resource. Figure 5 shows the way it has been shaped in Poland in recent years.

The element increasing M3 in relation to M2, i.e. debt securities of up to 2 years and operations with repurchase agreements between banks and the non-banking sector, i.e. instruments financing lending operations mainly in the interbank market for a limited time (mostly bonds and bills), is small – it is just ten plus billion zloty, that is approximately 1% of GDP. M2 is more important as its essential part consists of time deposits in banks, i.e. a unique capital base of the economy.

Data for December in each year	**2012** PLN billion	GDP %	**2014** PLN billion	GDP %	**2016** PLN billion	GDP %	**2017** PLN billion	GDP %	**2018** PLN billion	GDP %
M3	**921**	***57.7***	**1059**	***61.6***	**1265**	***68.0***	**1261**	***63.4***	**1446**	***68.4***
Debt securities up to 2 years	8		4		3		4		7	
Operations with repurchase agreements	13		10		6		8		11	
M2	**900**	***56.4***	**1045**	***60.7***	**1256**	***67.5***	**1249**	***62.8***	**1428**	***67.5***
Deposits and other up to 2 years inclusive	416	*26.0*	438	*25.5*	441	*23.7*	419	*21.1*	416	*19.7*
M1	**485**	***30.4***	**606**	***35.3***	**815**	***43.8***	**830**	***41.7***	**1012**	***47.9***
Deposits and other current liabilities	382	*23.9*	476	*27.7*	641	*34.4*	654	*32.9*	809	*38.2*
Cash in circulation (outside of banks)	103	*6.4*	130	*7.6*	174	*9.3*	177	*8.9*	203	*9.6*

Figure 5. Structure of the Polish pecuniary resource

Source: National Bank of Poland (NBP).

Comparisons with other countries lead to interesting conclusions. It is noteworthy that in the USA the value of the M2 pecuniary resource in relation to GDP remains similar[14]: 63% in 2012 and 65%, 69%, 69% and 68% in subsequent years; but although USA's current deposits forming part of the M1 money constituted only 8% (so M1 money is 15% of GDP), while the time deposits co-creating the M2 aggregate constituted almost 5% of GDP, the deposit structure in Poland is fundamentally different and variable: whereas time deposits had a slight advantage in 2012, their share continued to drop over the years, from 26% to 20% of GDP, and the significance of current deposits grew from 24% to 38% of GDP, as a result, their number in 2018 being twice as high as that of time deposits.

In European countries, where the financial system in comparison to the United States is more tied to the banking system than to financial institutions and the stock exchange, the size of the M2 resource in relation to GDP is one hundred and several dozen percent, the global average of the ratio for Broad Money (closer to our M3) is 125%, for OECD countries it is 116%, for Japan it is 125%, for the United Kingdom it is 155%, and for China about 200%; in the USA, Broad Money is only a little higher than M2 and constitutes 90% of GDP[15].

In systems based on the banking sector, the deposit part of the M2 resource is crucial for crediting the economy, and the economic equilibrium depends on a more or less harmonious relationship between savings and investments[16], i.e. one where money does not sit idle, frozen as overliquidity of the banking system, but is used to foster development and the stability of financial relations. For liquid functioning of today's economies, the financial system must have the size and reliability adapted to modern requirements, and so the role of economic policy, understood in a broad sense, both fiscal and monetary, is to influence economic structures to allow them to develop properly and to build both the ability to accumulate savings and the propensity to invest.

Surplus as a source of financing for the state

A part of the surplus of produced loaves of bread may (or even has to) be used to satisfy the needs of those who build the institutions that organise society, i.e. state institutions forming what we refer to as the public sector. Their function is

[14] According to FRED Economic Data Economic Research Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/graph/?g=dZn (10.06.2020).

[15] According to World Bank Broad Money as a percentage of GDP, https://data.worldbank.org/indicator/fm.lbl.bmny.gd.zs; The formal definition of this money aggregate is as follows: "Broad money is the sum of currency outside banks; demand deposits other than those of the central government; the time savings and foreign currency deposits of resident sectors other than the central government; bank and traveller's checks; and other securities such as certificates of deposit and commercial paper".

[16] The tools of this policy include mainly the rates of the central bank and, to a certain extent, the current open market policy; still its primary goal is price stabilisation (i.e. direct inflation targeting strategy).

to pursue common good, to deliver goods of public and social interest (Owsiak, 2002, pp. 21–32). For that system to work, it needs a financing system, i.e. a way of supplying money to cover the operational costs of the public sector. Our simple (by definition simplified) model shows that if the cohesion of the system is to be preserved, the funds to finance the state should be provided primarily by the Baker – the only entrepreneur in our model, as he is the one that generates the surplus of the unsold loaves of bread and as such he has to give some of his income from the previous month to the state to allow it to generate demand for the loaves through its spending.

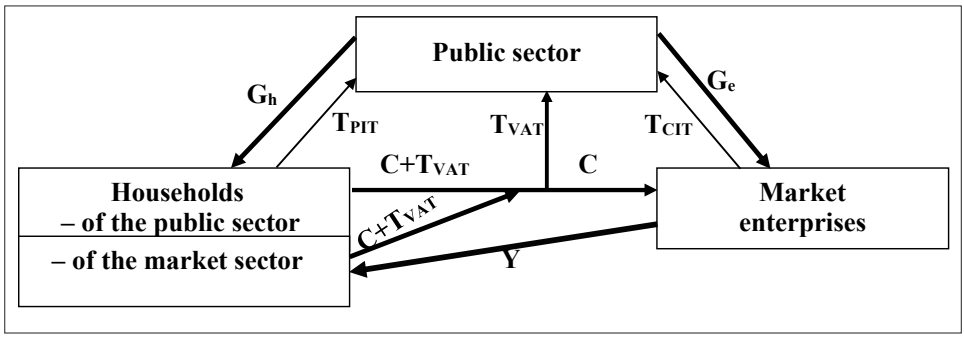

Figure 6. Circulation of money as a result of financing the public sector with taxes

Source: own study.

The model shows the logic of the economic mechanism: the system functions due to the continuous circulation of money: the earnings from the previous periods are used to finance purchases in the next cycle. If the capitalist had not been taxed, i.e. the money had not been paid to the state, then a certain part of the surplus of 500 or 700 loaves would have increased the inventory of unsold finished products and the Baker would not have made money; he earns revenue because he pays taxes (and, as we have seen in the previous chapter, either transfers some of the revenue to the financial system or makes direct investments). This shows that taxes are not a loss to an entrepreneur, but they instead incorporate money into a cycle of trade where he eventually gets his money back. In the real world, tax is of course a general obligation, with both entrepreneurs (legal entities) and households (natural persons) contributing to the financing of the common good. The money circulation mechanism related to the financing of the public sphere is depicted in Figure 6.

Taxes are an arena of gigantic misunderstandings and cynical definition-related lies, i.e. disinformation. So let us explain the basic structure of a tax system. Households pay income taxes, directly (T_{PIT}) and indirectly (T_{VAT}), while entrepreneurs pay income taxes (T_{CIT}). We are leaving out other less significant taxes, paid mostly to local governments (aside from their share in the PIT and

CIT). Taxation of employees means financing the public sector by transferring a part of their income, and as such takes place at the expense of their ability to satisfy their needs: direct PIT reduces their disposable income (after tax versus before tax) and the indirect tax (VAT) reduces their real income by increasing the prices of goods and services – a reduction in real income means that they can buy less than they would be able to if there were no indirect tax. As a result, by generating these two flows of funds detached from the income stream, natural persons in fact share some of what was supposed to be used to satisfy the needs of their families, i.e. the pool of 500 (or 300) loaves of bread. Tax as a way of capturing a part of the purchasing power of the community of employees means a redistribution of income that does not remove the "overhang" of the structural, system-based surplus of the manufactured product. Tax imposed on employees means simply "poverty sharing" between employees and the state – i.e. the people employed in the public sector and others, tied to the state through a certain form of economic relations.

On the other hand, the tax paid by entrepreneurs (CIT) to the state budget is partially transferred to the households of public sector employees (G_{GD}) and, in consumption expenses C, it returns to entrepreneurs – to that collective Baker that "bakes" the consumer goods that satisfy the needs of households. The remaining part of the tax supports central and local government spending in the market, such as purchasing of goods and services, which indirectly channels the money back to entrepreneurs. In our Great Bakery model, those transfers of funds mean the purchase of a part of the surplus of 500 or 700 produced loaves of bread. It can be easily noticed that if the surplus of the unsold product increases for the entrepreneur, for instance as a result of a drop in internal demand, where the entrepreneur has invested in technologies limiting employment, it would be necessary to increase the CIT in order to preserve the cohesion of the system.

Our model proves that the economic processes implemented in that economy and the structural changes that have led to labour cost reduction mean the need to increase the taxation of the capitalist in order to reduce system incoherence – this is simply the logic of the system. In practice, however, a reverse policy is pursued: It should be noted that when the corporate income tax (CIT) was introduced in Poland in 1992 it was at 40%, which was consistent with that logic[17], but in the 1992–1996 period the CIT was gradually reduced to reach 19% in 2014. Curiously enough, the CIT reduction in 2004 from 27% to 19% entailed a certain

[17] It should be noted that in the USA corporate income tax rates in the period from early 1950s, when they grew from approximately 40% (the level from the 1940s and the years directly after World War II), to the late 1970s were approximately 50%, and progressive personal income tax rates reached 90%, which was later reduced to 70% (See: Spencer, 1977). True, this period ended in stagflation, which prompted President Reagan to make tax cuts, but before that period the economy was excellent and America was able not only to offer a welfare state programme but also to pursue an impressive space programme.

increase in economic growth rate, from 3.9% to 5.3%, but in the next year the rate dropped to 3.6%; it was clearly higher in the subsequent years (6.2%, 6.8% and 5.1% respectively) but in 2009 it plummeted to 1.6%, which can be considered as an effect of the global crisis. In practice, the economic growth rate depends on a number of factors – it is hard to find a reasonable explanation for the thesis that a reduction in taxes for entrepreneurs may help increase it. It must be noted that the CIT reduction was consistent with the global trend, it was a response to the reductions in other countries, to tax competition in the period where there was no free flow of labour in the EU.

The year 1992 marked the introduction of a three-bracket personal income tax (PIT) with 20%, 30% and 40% rates in 1992–1993; 21%, 33% and 45% in the 1994–1996 period; and then 20%, 32% and 44% in 1997, further reduced to 19%, 30% and 40%, and finally to two rates of 18% and 32% introduced in 2009. Significantly, in the last year where there were three rates, the highest one applied to 1.59% of taxpayers, who contributed 20.69% of the PIT proceeds; afterwards, the number of rates was reduced to two, and the second rate 32% applied to 1.59%, who contributed 20.7% of PIT proceeds; in 2013[18], the last rate was paid by 2.5%, who contributed 24.7% of the PIT proceeds. The table below shows the actual structure of budget financing from taxes that emerged from those changes.

Table 3. Relationships between proceeds from PIT, CIT and VAT

Specification	2000	2005	2010	2015	2018
State budget					
PIT/CIT	2.64	3.69	4.00	4.33	4.07
VAT/PIT	1.16	1.30	1.24	1.10	1.24
(PIT+VAT)/CIT	5.71	8.48	8.95	9.10	9.12
(PIT+VAT+excise duties)/ CIT	7.33	10.98	11.51	11.54	11.2
Public Finance Sector					
PIT/CIT	3.00	3.66	4.10	4.58	4.34
VAT/PIT	0.97	0.99	0.95	0.82	0.91
(PIT+VAT)/CIT	5.90	7.29	7.98	8.34	8.30
(PIT+VAT+excise duties)/ CIT	7.43	9.19	9.99	10.25	9.93

Source: own study based on data from the Polish Central Statistical Office.

As we can see, natural persons, i.e. individual citizens, as a result of PIT (which we combine at this point with the healthcare system financing, separated from taxes

[18] 2014 was the last year when the Polish Ministry of Finance published the Tax Newsletter where the structures of tax proceeds were analysed (it used to come out at the end of every subsequent year). But after that year, the unit in charge of developing the newsletter was shut down.

in 1999) being directly charged on their income, gave the state 2.6 times more in the 1990s, and even in 2000, and the following years the entrepreneurs paying CIT gave over 4 times more. However, the indirect tax (VAT), covered mainly by consumers, which was 88% of the PIT burden back in 1995, increased over the next years by ten plus to thirty percent.

As a result, the total burden arising from direct taxes and VAT payable to the state was five times, and in the next years 9 times, higher than what entrepreneurs pay as CIT – if we add excise duties paid mainly by consumers, this important tax indirectly burdening their income, we get 11 times more than the contribution of entrepreneurs (or, to be more precise, the legal entities that are VAT payers) to the common good, a relation which has been exhibiting a growth tendency since the 1990s. If we take into account the whole public finance sector, the relations differ slightly since only a part of PIT and CIT is allocated to the state budget, with local governments taking over ¼ of CIT and more than a half of PIT; additionally, local governments impose various local taxes. The whole public finance sector received from 3 times more in 2000 to 4.6 more in 2015 and 4.3 more in 2018.

The relation of VAT to PIT plus the healthcare contribution shows that in the case of the state budget, the VAT stream has been over 10 to 20+ or even 30% more, while, from a broader perspective, in the public finance sector it is several to ten plus percent higher, which stems from the fact that PIT is split between the state and local governments. The total proceeds from PIT and VAT for the whole sector were from 5 to 8 times higher than proceeds from CIT, and if we add the excise duty, then individual citizens contributed 9 to over 10 times more to the public than entrepreneurs or, to be more precise, legal persons that were CIT payers did. At the same time, fiscalism, as a relation of the income of the public sector to GDP, continued to decrease.

Contributions to the common good should be of course paid by those who use it – this is a common and, in principle, reasonable belief but it stems from microeconomic logic, i.e. from the perspective of an economic entity and a household. In contrast, the Great Bakery model shows that if financing is to clear the market of the product surplus, which, as a consequence of deficiency in demand (natural for the system) on the part of direct manufacturers represents non-rotating stock in the form of loaves of bread, then the funds for that surplus should be supplied by the Baker in the form of a tax for the common good, paid to finance the state.

The model leads us to a logical conclusion that for a balance of macroeconomic flows to be achieved, the entrepreneur should pay higher taxes; only then the market would be cleared of the product manufactured by his Bakery. One could say, which the supporters of popular neoliberal views would find outrageous, that there are certain benefits from Robin Hood: by taking away from the rich and giving to the poor, he causes the passive, inactive, hoarded money of rich people to be transferred to the economy and become activated in the shopping that the poor are able to do

due to the movement of some resources by Robin Hood. As a result, the economy is re-energised and entrepreneurs make money again. In the meantime, as a result of the pressure brought by the New Economy, Poland and many other countries have been pursuing a policy that results in actions in the opposite direction: more and more is taken away from employees (the poor), as a result of which companies, due to their growing profits, have growing cash resources, and since the internal demand shrinks, the only possibility of earning profit is to join the globalisation trend, i.e. expand to the outside. This will be addressed in the next chapter.

It should be mentioned that the dilemma of who is to give more to the functioning of the public sector is becoming a matter of ethics – (economic) ethics must be now approached differently. As noted by the Israeli historian Yuval Harari (2014, pp. 424–425), the author of an impressive work that is an overview of the development of humanity over thousands of years and across continents, modern days require a new combination of consumerist ethics with capitalist ethics: "The capitalist and consumerist ethics are two sides of the same coin, a merger of two commandments. The supreme commandment of the rich is 'Invest! The supreme commandment of the rest of us is 'Buy!". He believes that this makes it possible to "square the consumerist ethic with the capitalist ethic of the business person, according to which profits should not be wasted, and should instead be reinvested in production". However, economic ethics must be reflected in the logic of economic processes. If our Baker is to reinvest the profit, someone first needs to buy his products because without sale, i.e. consumption, production would be pointless. The first basic demand creates a community of employees, who form the "purchasing power" to drive that mechanism of economic processes; as a result, as we have noted, it makes no sense to burden employees with taxes on this mechanism because this only transfers the purchasing power that will cleanse the market of the 500, or later 300, loaves of bread. This is why the tax that clears the product surplus should be in principle paid by the Baker, and if the employees' wages have been reduced, the tax rate must be even higher so that the state generates an additional purchasing power, and the money returns to the state anyway.

The conclusion is obvious: our Baker needs to pass on his profit either to the financial system or to the public sector, and this means that the only rational solution is a tax system with a high tax rate for the entrepreneur (in any case higher than for the employees), where the tax it is not just a transfer of some of his profit but creates the mechanism because it includes an investment allowance – and the rate should grow whenever labour costs are reduced, i.e. work efficiency is improved. The reason is simple: because this is when the surplus of unsold product grows.

When the 40% corporate income tax (CIT) was introduced in Poland in 1992 and the PIT tax rates in 1992 and 1993 were 20%, 30% and 40%[19], and a vast

[19] In the 1994–1996 period, tax rates were increased to 21%, 33% and 45%; they were slightly reduced in 1997 to 20%, 32% and 44%, in 2009 each of them was reduced by one percentage point,

majority (nearly 99%) of taxpayers paid taxes according to either the 20% or the 30% rate, CIT was visibly much higher; CIT included an investment allowance but in the 1992–1996 period, CIT was gradually reduced to 19% in 2014 and the allowance was cancelled; it was reintroduced in 2017 but its range is limited as tax deductible costs may include only expenses for the purchase of machines and equipment to a value of PLN 10 to 100,000. As a result, while in 1995 and even in 2000 the citizens' PIT obligations towards the budget were 2.6 times higher than the CIT obligations of entrepreneurs, starting from 2010 they were 4 times as high.

It should be noted that in the USA corporate income tax rates in the period from the early 1950s, when they grew from approximately 40% (the level from the 1940s and the years directly after World War II), to the late 1970s were approximately 50%. At that time, progressive personal income tax rates reached 90%, which was later reduced to 70% but only a small percentage of taxpayers paid such high taxes. The richest taxpayers, with an income above 1 million dollars a year, paid taxes of 20–25% (31% of that group), with percentage in the next tax class (25–30%) only slightly lower (27.2% of that group) since they used savings or investment allowances (Thurow, 2009, p. 268). For all taxpayers, the mode was 15–20% (52.7% of taxpayers) but a considerable percentage (21.5%) paid a 0–5% tax. As a result, taxes actually paid by employees were lower than CIT rates. True, this period ended in the stagflation that did not have an entirely identified underlying cause, which prompted President Reagan to make tax cuts, but before that period the economy was excellent and America was able not only to offer a welfare state programme but also to pursue an impressive space programme.

A tax system containing what we define as tax credits, referred to in English terminology as tax incentives, becomes an economic policy element that does not only have a purely fiscal function, i.e. the function of supplying funds to the budget, but it also activates a certain economic mechanism by shaping the behaviour of the taxpayer, for whom it serves as a kind of a directive: "Invest or give away the money you have earned so that the state, by hiring employees (possibly also extra ones), by giving jobs to the unemployed left after the lay-offs in the Bakery, creates a demand to free you from the stock of the product surplus in the warehouse".

Therefore, the market can be cleared only through rational taxation of the entrepreneur – with a tax that includes an investment allowance and as such creates a mechanism to support activation of funds in order to create new production resources (this can be referred to as active investing) or a savings allowance, i.e. an allowance that supports the transfer of such funds to the financial system (this can be considered as a form or passive investing) to activate them within its

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and ultimately one was removed and only two were left: 18% and 32%. PiS (the political party Law and Justice) continued slight PIT reductions.

business. In this way, the allowance creates a mechanism through the integration of the first trend (discussed in the previous point) for "monetisation" of the surplus, i.e. one that involves saving and investing, with the second trend involving state financing.

In the meantime, the current reality is marked by continuous pressure on the reduction of corporate taxes, rivalry between countries for the inflow of foreign capital through tax incentives, and the desire to become more competitive through reduction of corporate taxes. This modern-day illusion and ill-fated trend in economic policy, leading even to certain "tax wars" with "tax dumping canons", results only in a growing system imbalances and internal economic tensions, and brings about a crisis every now and then. The New Economy calls for leaving most money for the capitalist, because the more profit he makes the more he invests, according to the capitalist ethics addressed by Harari. But this is naive. A capitalist who, as a result of tax cuts for the richest, is left with more money at his disposal does not necessarily invest it to create more jobs or improve efficiency, because his propensity to invest does not depend on his current profit but rather on the economy he expects in the future and on the current assessment of the effectiveness of investment undertakings. With a weak and uncertain economy, he would rather invest in the stock market – in other companies, ones from outside his industry, where the risk is, at least in the short term, relatively well defined; he would rather contribute to another speculative bubble than undertake the difficult task of implementing his own investment, not to mention that he may prefer some personal goals on which he would be more willing to spend the money.

The neoliberals who use Smith for support do not necessarily read him – just like declared Marxists who have actually never reached for any of Marx's works. As it turns out, Adam Smith definitely did not recommend supporting the profit of entrepreneurs at the expense of employees, because he understood that to succeed, entrepreneurs require the high purchasing power of consumers, i.e. mainly their employees. He saw the need for balance in the creation of income and profit streams, even if he approached the problem mainly from the perspective of the impact on prices. In Chapter IX of his fundamental work he notes wryly: "In reality high profits tend much more to raise the price of work than high wages. (...) In raising the price of commodities the rise of wages operates in the same manner as simple interest does in the accumulation of debt. The rise of profit operates like compound interest. Our merchants and master-manufacturers complain much about the bad effects of high wages in raising the price, and thereby lessening the sale of their goods both at home and abroad. They say nothing concerning the bad effects of high profits. They are silent with regard to the pernicious effects of their own gains. They complain only of those of other people." (Smith, 2003, pp. 142–143).

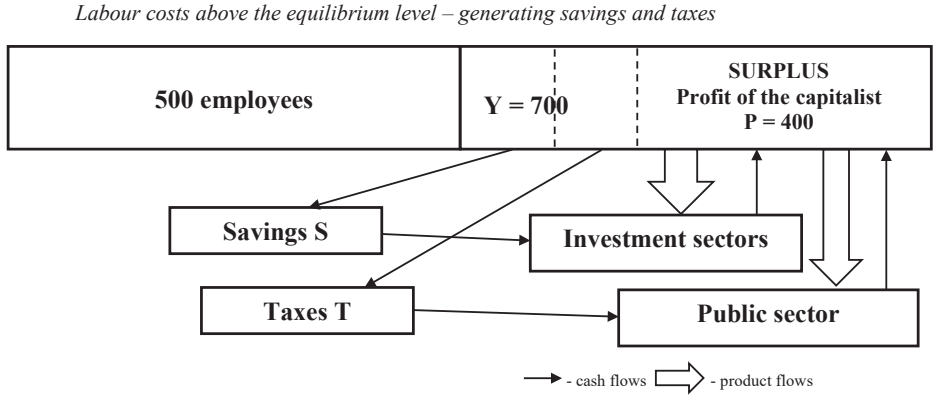

Figure 7. Savings as a financial surplus of employees

Source: own study.

Since with generally lower levels of wages the tax system focuses mostly on taxing the income of employees, whether directly or indirectly (as we have seen in the data in Table 3), mostly with indirect tax, i.e. by increasing the prices and thus reducing real income, this results in low tax proceeds and insufficient flows from various wage-related contributions, such as healthcare or retirement contributions, and the whole social security sphere suffers in general. But other areas financed from taxes are underfinanced too, such as education, science or the development of the infrastructure for which the state is responsible.

According to our Great Bakery model, market clearing requires the entrepreneur to pay taxes. Just as the community of the Baker's employees may generate savings, the financing of the state through taxes may become the task of employees, provided that the income distribution at the level of the Baker changes, as illustrated in Figure 7.

If the portion of the Baker's income that is spent on wages is increased, employees will be able to pay the tax without this affecting the satisfaction of their needs and thus the income transferred to the public sector return due to the redistribution function of the budget. The process mimics what happened at the beginning of the 1990s in Poland, when PIT was introduced: people's income was re-calculated as a gross amount, which meant their wages were increased by the amount which they were supposed to pay as tax. It was as if railroad points were switched to redirect a part of the national income stream to support the public sphere.

EXPORT – ENRICHING THE ECONOMY

Finally, there is a third direction for distributing (a part of) the surplus of the manufactured goods and changing it to money – that of sales abroad, or exports. Unable to sell his loaves of bread in the domestic market, our Baker may offer

them to foreign buyers. However, export has special significance not only for that specific entrepreneur but for the whole economy. In our model this will mean that the surplus products will be exchanged for foreign currencies – in the form of cash or bank account records. Export either serves as a means to finance import or becomes a tool for international expansion. Yet export cannot be treated as a self-sufficient category, but must always be addressed together with import. Capital expansion actually takes place through net export. Table 4 shows what part of GDP is represented by export and import in particular countries.

Table 4. Export and import of countries in relation to GDP

Export of goods/GDP in %					PL= 100	Import of goods/GDP in %					PL= 100
Countries		2010	2015	2017		Countries		2010	2015	2017	
World		**22.9**	**21.8**	**22.5**	51	**World**		**23.0**	**21.8**	**23.0**	52
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1	Slovakia	71.1	85.5	88.0	200	1	Slovakia	73.5	85.4	86.8	197
2	Belgium	84.1	87.5	87.2	198	2	Belgium	80.9	82.6	82.4	187
3	Czech Republic	64.3	84.4	83.6	190	3	Czech Republic	61.2	75.6	75.2	171
4	Hungary	72.3	81.4	81.7	185	4	Hungary	66.9	73.8	74.6	170
5	Slovenia	51.5	64.2	65.2	148	5	Belarus	61.2	54.1	72.8	166
6	Lithuania	29.0	60.5	63.7	145	6	Lithuania	63.2	67.0	69.2	157
7	Netherlands	58.2	61.9	63.5	144	7	Slovenia	54.8	62.1	63.7	145
8	Belarus	44.4	47.6	62.1	141	8	Estonia	61.4	63.1	61.6	140
9	Bulgaria	40.3	51.5	55.4	126	9	Bulgaria	49.9	57.6	60.1	137
10	Estonia	58.0	56.1	53.8	122	10	Netherlands	52.0	55.5	55.9	127
11	Ukraine	37.8	41.9	46.5	106	11	Ukraine	44.7	41.2	53.2	121
12	**Poland**	**33.4**	**41.6**	**44.0**	100	12	Latvia	46.4	51.3	52.8	120
13	Latvia	36.9	42.6	43.2	98	13	Malta	63.7	61.6	52.6	120
14	Ireland	54.3	42.8	41.4	94	14	Croatia	33.4	41.2	46.7	106
15	Austria	37.0	38.2	38.4	87	15	**Poland**	**37.2**	**40.7**	**44.0**	100
16	South Korea	42.6	38.1	37.5	85	16	Cyprus	33.3	28.3	42.2	96
17	Germany	36.9	39.2	36.2	82	17	Romania	37.1	39.2	40.3	92
18	Mexico	28.2	32.5	35.6	81	18	Austria	38.4	38.8	40.0	91
19	Romania	29.6	34.0	33.4	76	19	Mexico	28.5	33.8	36.6	83
20	Switzerland	31.8	31.5	33.0	75	20	Portugal	32.6	33.6	35.6	81
21	Malta	41.3	35.6	31.4	71	21	Luxembourg	41.0	33.8	34.5	78
22	Denmark	29.7	31.4	31.2	71	22	South Korea	38.9	31.6	31.3	71
23	Croatia	19.7	25.7	30.2	68	23	Sweden	30.4	27.8	28.7	65

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
24	Sweden	32.4	28.1	28.6	65	24	Germany	30.9	31.1	28.6	65
25	Portugal	20.8	27.8	28.4	64	25	Denmark	25.8	28.3	28.3	64
26	Russia	24.2	25.2	27.8	63	26	Greece	23.9	24.6	28.3	64
27	Finland	28.0	25.8	26.7	61	27	Finland	27.7	26.1	27.8	63
28	Italy	21.0	24.9	26.0	59	28	Switzerland	28.6	25.8	27.8	63
29	Canada	24.0	26.3	25.6	58	29	Turkey	24.0	24.1	27.4	62
30	Norway	30.5	26.7	25.6	58	30	Spain	22.0	26.1	26.7	61
31	South Africa	24.4	25.6	25.5	58	31	Ireland	29.1	26.7	26.6	60
32	Spain	17.2	23.5	24.3	55	32	Canada	24.3	26.9	25.8	59
33	Luxembourg	27.0	22.4	23.1	52	33	France	23.0	23.2	24.2	55
34	France	19.6	20.3	20.7	47	34	South Africa	22.1	27.0	23.8	54
35	China	25.9	20.6	20.4	46	35	UK	23.2	21.5	23.5	53
36	New Zealand	21.3	19.3	18.7	42	36	Italy	22.9	22.4	23.3	53
37	Turkey	14.8	16.7	18.4	42	37	Norway	18.0	19.6	20.7	47
38	UK	17.0	15.2	16.8	38	38	New Zealand	20.8	20.5	19.7	45
39	Australia	16.4	15.0	16.4	37	39	Russia	14.0	13.4	17.7	40
40	Greece	9.7	14.6	16.3	37	40	India	20.0	18.3	17.3	39
41	Japan	13.5	14.2	16.0	36	41	China	22.9	15.2	16.5	38
42	Cyprus	5.8	9.7	15.2	35	42	Australia	14.9	16.1	15.7	36
43	Brazil	9.1	10.6	12.1	28	43	Japan	12.1	14.8	15.4	35
44	India	13.5	12.5	11.6	26	44	USA	13.1	12.3	12.4	28
45	Argentina	15.2	9.3	9.1	21	45	Brazil	8.7	9.9	8.8	20
46	USA	8.5	8.3	7.9	18	46	Argentina	11.3	9.3	8.7	20

Note: The data were sorted from the highest to the lowest value for 2017.

Source: own study based on yearbooks of the Polish Central Statistical Office.

As we can see, top places are occupied by post-communist countries, of which we know from Table 1 that their share of employment-related costs in GDP was much lower than elsewhere. The correlation between export and that share was not high but it was clearly negative[20]. There are certain exceptions at

[20] The correlation coefficient for 2017 was r = -0.155 for the correlation between the share of employment-related costs and export, and r = -0.184 for the correlation with import; the regression coefficients were -0.60 and -0.68 respectively.

the beginning of that chart: Belgium, second, where export and import jointly represent well above 80% of GDP, which shows that it is a trading, transit country, acting as an intermediary (they import only to export the imported goods), and the Netherlands, seventh, with export over 60% and import over 50%, a major surplus. Poland is positioned quite high, with export of goods (similarly to the slightly lower import) constituting 44% of GDP[21]. But what is particularly noteworthy is that its share grew considerably in 2010 and, significantly, it is not much higher than in Germany (36.2%) which used to be ahead of Poland in 2010; until 2000, Polish export was only half the rate, constituting merely 20% of GDP. In 2018, when a slight commercial deficit reappeared (USD -5.4 billion), our main trading partners in import (USD 270.2 billion) were Germany (22.6%), China (11.6%) and Russia, while in export (USD 264.8 billion) also Germany (28.2%), the Czech Republic (6.4%) and the United Kingdom (6.2%). According to the latest data, the year 2019 was marked by a USD 2.7 billion (PLN 10.6 billion) surplus in the trade of goods, and the current account[22] revealed a surplus of USD 6.6 billion (PLN 25.4 billion).

Our economy is clearly characterised by strong export but since the majority of enterprises were included in the manufacturing cycles for semi-products, accessories and subassemblies for western partners (to be discussed later in the paper) interested in receiving high-quality but cheap elements, we must remain competitive especially in terms of price. One could say we have a "syndrome of a secondary, subpar economy". The problem pertains not only to us. The high rankings of post-communist countries in the table are the consequence of the special international division of labour policy pursued by those countries and by the supranational structures that have dominated them. It is as if the Bakery in our metaphoric country was engaged (for example as a result of a takeover) to produce pies rather than bread, for export only, as semi-finished products for foreign manufacturers of some products preferred in their respective countries. As a result, the export of the Baker's country will increase but for the needs of the employees, who need bread, to be satisfied, import must also increase because if they do not produce what satisfies their basic needs by themselves, it must be brought from abroad. Then, in the case of weak economies, high export may be balanced out with import. But strong economies will have a commercial surplus even if their export in relation to GDP is lower.

Poland's export almost matched its import in 2017, while some countries had a substantial export surplus. Let us take a look at the balance of trade (Table 5).

[21] In 2018, export constituted 43.7% and import 44.7%, with the resulting GDP deficit 0.96%.

[22] I would like to reiterate that the current account is created by streams of flows with the following balances: profit/loss on trade in goods (PLN +10.6 billion), exchange of services (PLN +104.6 billion), primary income (PLN -82.1 billion), secondary income (PLN -7.7 billion).

Table 5. Balances for the import of goods in billion dollars and in relation to GDP

Balance of goods (USD billion)					Balance of goods (% GDP)				
Countries		2010	2015	2017	Countries		2010	2015	2017
World		**-34.1**	**-21.5**	**-406.4**	**World**		**-0.05**	**-0.03**	**-0.54**
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
1	China	182.1	603.7	434.4	1	Ireland	25.22	16.13	14.85
2	Germany	205.4	270.8	279.4	2	Russia	10.23	11.78	10.14
3	Russia	168.0	160.9	130.1	3	Czech Republic	3.10	8.83	8.39
4	South Korea	41.2	90.3	95.6	4	Netherlands	6.22	6.41	7.58
5	Netherlands	52.7	49.0	63.0	5	Germany	6.01	8.01	7.56
6	Brazil	10.4	12.3	60.3	6	Hungary	5.46	7.62	7.10
7	Italy	-40.1	46.1	54.1	7	South Korea	3.76	6.53	6.24
8	Ireland	56.0	46.9	49.2	8	Switzerland	3.23	5.67	5.19
9	Switzerland	18.9	38.0	35.3	9	Norway	12.43	7.17	4.82
10	Japan	77.3	-23.5	26.9	10	Belgium	3.25	4.91	4.81
11	Belgium	15.7	22.3	23.7	11	China	2.98	5.46	3.88
12	Norway	53.3	27.7	19.2	12	Brazil	0.47	0.68	3.36
13	Czech Republic	6.4	16.5	18.1	13	Denmark	3.91	3.08	2.84
14	Hungary	7.1	9.4	9.9	14	Italy	-1.89	2.51	2.78
15	Australia	19.1	-12.6	9.8	15	South Africa	2.24	-1.35	1.68
16	Denmark	12.6	9.3	9.3	16	Slovenia	-3.31	2.17	1.52
17	South Africa	8.4	-4.3	5.9	17	Slovakia	-2.33	0.11	1.22
18	Argentina	16.7	-0.1	2.1	18	Australia	1.48	-1.01	0.70
19	Slovakia	-2.1	0.1	1.2	19	Japan	1.36	-0.54	0.62
20	Slovenia	-1.6	0.9	0.7	20	Argentina	3.91	-0.01	0.33
21	**Poland**	**-18.3**	**4.1**	**0.4**	**21**	**Poland**	**-3.82**	**0.86**	**0.07**
22	Sweden	9.6	1.7	-0.9	22	Sweden	1.97	0.34	-0.16
23	New Zealand	0.7	-2.2	-2.1	23	Canada	-0.29	-0.63	-0.20
24	Estonia	-0.7	-1.6	-2.1	24	Mexico	-0.32	-1.24	-0.95
25	Lithuania	-12.7	-2.8	-2.6	25	New Zealand	0.45	-1.23	-1.01
26	Bulgaria	-4.9	-3.0	-2.7	26	Finland	0.29	-0.30	-1.12
27	Malta	-2.0	-2.9	-2.8	27	Austria	-1.46	-0.59	-1.54
28	Finland	0.7	-0.7	-2.8	28	Spain	-4.84	-2.52	-2.40
29	Latvia	-2.3	-2.4	-2.9	29	France	-3.47	-2.87	-3.44
30	Canada	-4.6	-9.9	-3.3	30	USA	-4.61	-4.08	-4.43
31	Belarus	-9.6	-3.6	-5.0	31	Bulgaria	-9.61	-6.04	-4.69
32	Cyprus	-7.1	-3.7	-5.9	32	Lithuania	-34.21	-6.57	-5.57
33	Ukraine	-9.3	0.6	-6.2	33	India	-6.50	-5.84	-5.70

1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
34	Austria	-5.7	-2.3	-6.4	34	UK	-6.14	-6.32	-6.65
35	Luxembourg	-7.4	-6.6	-7.1	35	Ukraine	-6.87	0.70	-6.70
36	Croatia	-8.2	-7.7	-8.6	36	Romania	-7.50	-5.20	-6.94
37	Mexico	-3.3	-14.5	-10.9	37	Portugal	-11.88	-5.84	-7.18
38	Romania	-12.5	-9.2	-14.7	38	Estonia	-3.38	-7.02	-7.74
39	Portugal	-28.3	-11.6	-15.7	39	Turkey	-9.28	-7.37	-8.99
40	Greece	-41.0	-19.6	-24.1	40	Latvia	-9.55	-8.74	-9.60
41	Spain	-69.3	-30.3	-31.6	41	Belarus	-16.84	-6.49	-10.70
42	Turkey	-71.7	-63.4	-76.6	42	Luxembourg	-14.05	-11.37	-11.43
43	France	-91.7	-70.0	-89.0	43	Greece	-14.14	-10.00	-12.04
44	India	-107.3	-125.4	-146.8	44	Croatia	-13.74	-15.47	-16.53
45	UK	-150.7	-183.0	-174.7	45	Malta	-22.38	-26.05	-21.23
46	USA	-690.7	-743.7	-862.8	46	Cyprus	-27.46	-18.68	-27.03

Note: The data were sorted from the highest to the lowest value for 2017.

Source: own study based on yearbooks of the Polish Central Statistical Office.

The world as a whole is almost balanced, with a slight negative inclination – even if the negative balance clearly increased in 2017; out of the 46 counties, 21 achieved a surplus (Poland comes in the 2017 list as basically balanced), while 25 had a trade deficit. It is a trivial observation that for some to have a trade surplus, others must have a deficit. As a result, the imbalance between the countries becomes an inevitable characteristic of the system and leads to tensions that must be compensated for by other macroeconomic balances (Cf. Żyżyński, 2009; Moździerz, 2018). First and foremost, balances of trade are accompanied by financial balances reflected in changes in the assets and liabilities of financial institutions and enterprises; balances of trade are flows that are not necessarily balanced but result in asset changes (changes in financial resources – the financial account) which compensate for those imbalances and, together with the flow account (current account), create a balance of payment that is balanced but which contains foreign exchange reserves (referred to as Official Reserve Assets) whose increase or decrease amortises relations with foreign countries. Flow relations are also accompanied by two twin balances, i.e. the balance of the state budget (public finance sector) and the financial balances of the private entities that save and take out loans.

Figure 8 illustrates the consequences of the trade imbalance between countries. The earnings of a net exporter from export X_E are higher than its spending on import Z_E, but its partner, a net importer, must spend more on import Z_I than it makes on export X_I. It would be hard to bring in more goods and services from abroad if insufficient foreign money has been made on export. However, a net exporter records asset growth, a financial surplus which is channelled to the international

financial market where the importer borrows the money that allows it to secure import being higher than export – that loan represents the importer's debt and will be reflected in the financial part of the balance of payments as foreign investment. One has a surplus, the other one has a debt – in this way the total balance of both countries is zero. The logic of the system is that the exporter must grant a loan to the importer so that the latter has the funds to buy the surplus of the exporter's non-rotating product stock and allow the importer to profit.

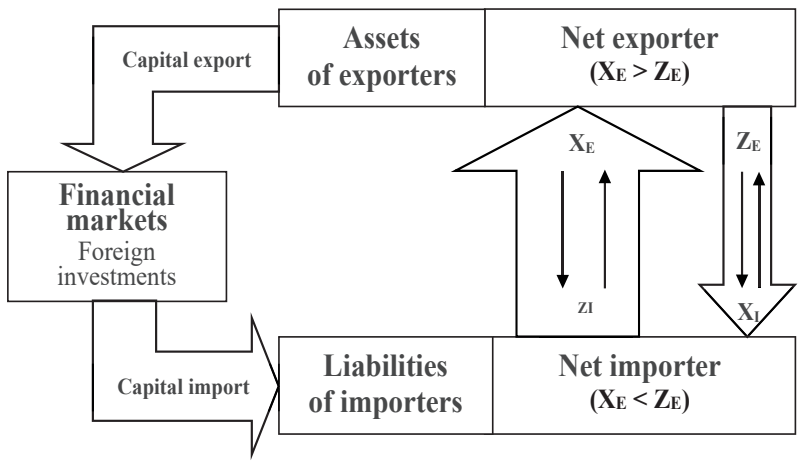

Figure 8. Cash flows between net exporters and importers

Source: own study.

As can be seen, international trade mimics internal relations: the Baker needs to pay the tax so that the state has the funds to pay the wages to the public sector employees and thus enable them to buy the loaves of bread produced by the Baker. It is a universal logic of economic processes, one we have seen before: exactly the same happens when our capitalist gathers savings so that the banks equipped with his funds could lend them to borrowers, who pay wages to their employees, and the employees purchase the loaves of bread that represent the Baker's surplus.

China is the leader in terms of the value of the balance, with a surplus of 434 billion dollars, which it uses to buy American bonds used by the American government to finance the deficit due to which some Americans may satisfy their needs – by buying Chinese products. Germany comes second, with almost 280 billion dollars accumulated. It lends money to Greece, for instance. The largest deficit (absolute value twice as high as China's surplus) was achieved by the United States: -863 billion dollars. But economic values need to be presented in a relative form; in relation to GDP, the highest surplus has been achieved by Ireland, Russia, Czech Republic, Netherlands, Germany and Hungary, while the largest deficit was run by Cyprus with over ¼ of GDP, Malta with 1/5 of GDP and Croatia and Greece.

A trade surplus may of course have a positive interpretation: once import is financed, we have the funds enriching the country that can be used for capital expansion abroad, as illustrated in Figure 7. But to have higher import[23], every economy needs to activate special mechanisms to secure the funds to finance additional purchase of goods abroad. As a consequence of our Great Bakery model, it can be said that the homeland of our Baker could give up on bread production, at least in a major part, and satisfy its needs by importation instead. But this requires money; foreign currencies must be obtained and so the country either takes out loans or sells its other assets. History, of course, shows that in order to finance the trade deficit, some countries have sought resources abroad, through military robbery – which has been probably a substantial reason behind wars.

In 2017, export in relation to GDP ranked Poland as 12th in the group of countries, almost at the end of the whole group of post-communist countries, and practically matched import, while in 2018, as it was already said, there was a deficit (PLN -20.4 billion), and in 2019 a surplus (PLN 10.6 billion)[24]. Since farming and industrial production in Poland creates 77% of GDP, it can be said that export encompasses almost 60 percent of farming and industrial production, i.e. well above a half of what we produce serves other countries; on the other hand, to satisfy our consumer and investment needs, we must import products of more or less the same value, with the catch that the value of import is calculated according to the market rate, which nowadays depends less on trade and more on financial (including speculative) flows, and is 40–50% below the purchasing power parity[25]. This makes such import quite expensive.

Overproduction – an immanent characteristic of a capitalist economy

The three directions for distributing the product surplus that allows the Baker to change it to money, i.e. to make profit, can be presented based on the Great Bakery model as illustrated in Figure 9.

In this way, we have reached the fundamental definition of Gross Domestic Product (GDP): what has been produced is divided into what has been consumed (*C*) plus what has been allocated to investment (*I*) plus government spending (*G*) plus export (*X*).

[23] The United States are an exception as they have a special, highly convenient commodity, cheap in production: the US dollar.

[24] It must be remembered (as already mentioned) that we should look at relations with other countries holistically, and, first, take into account the whole current account and, second, consider other elements of the balance of payments.

[25] The PLN/USD rate in 2018 was 3.61, while the purchasing power parity was 1.78, which resulted in a rate disparity of 50.8%, its lowest value recorded in 2008 (23.5%); the disparity in relation to EUR is about 40%. (Data: OECD Purchasing Power Parity Statistics)

As has been said, the existence of a surplus, i.e. what has been produced above C, directly consumed by employees, is a consequence of the obvious fact that labour costs are merely part of the produced value. It is crucial that the surplus is originally tangible, being simply the manufactured product[26], and this product must be sold, which is why appropriate financial processes must be activated for that purpose – the distribution (allocation) of money: savings must be generated and taxes must be paid. This fact is the basis for launching all the complex mechanisms and institutions of a market economy. The logic of the model suggests that both savings and taxes represent the activation of the money ultimately to be used to purchase a part of the system surplus, i.e. clear the market of the manufactured product. However, when wages are low, i.e. when they only suffice to satisfy the basic needs of employees (everyone gets their one loaf of bread), the money should be generated by the Bakery owner – the entrepreneur. If we postulate that the burden for the entrepreneur be reduced, then more money must be directly channelled to the employees, which means that the wages must rise above the equilibrium level, as reminded by Levinson. So, as we can see, it is the entrepreneur who is responsible for ensuring the cohesion of the economic system. System cohesion means that employees and the entrepreneur form a community that produces, sells, earns, spends, saves and pays taxes, and all these activities activate the money circulation processes that are to ultimately result in the money being transferred to the entrepreneur, who is at the same time the starting point for the distribution and circulation of money.

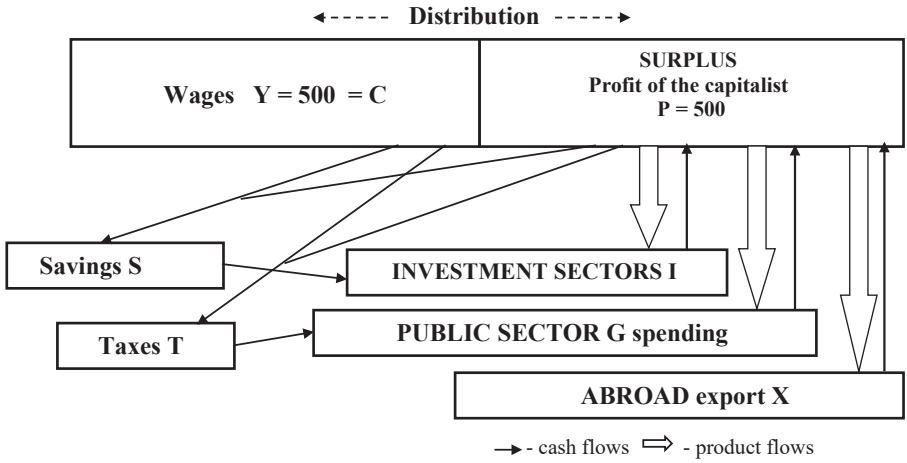

Figure 9. Surplus distribution and cash flows

Source: own study.

[26] It is easily observed that things are different for services. There is no surplus product, there is a surplus of value in relation to labour costs and that surplus is the direct financial profit of the owner of the service facility.

The distribution line marked on the chart differs as to particular enterprises; the macroeconomic state is always the outcome of millions of aggregated and averaged individual conditions. We receive a resulting distribution line that defines the macroeconomic efficiency of work, and our model confirms the trivial conclusion that the higher the efficiency (i.e. the resulting surplus):

- the more money from the entrepreneur's profit can be allocated to development,
- the better the financing for the financial sphere – from the taxes paid by the entrepreneur,
- the higher the potential export and the resulting export surplus permitting capital foreign expansion.

Still, these benefits require an efficient financial system. The model also answers the following question: what if an extreme hypothetical condition emerged where production were completely automated and, as a result, human labour reduced to zero – this extreme situation is illustrated in Figure 10. We may propose an obvious conclusion: the Baker's employee who lost their jobs as a result of technological progress would have to be absorbed by the public sector, which would have to give them either jobs or welfare benefits; some could be transferred to the sphere of social activity that is engaged in scientific research and the development of innovation and innovative high-tech enterprises – after all, someone had to invent and manufacture the automated process lines for production of the bakery products made by the Great Bakery. Both the public sector and enterprises need financing to create advanced technologies. They obtain it through taxes and through savings activated by the financial system in various forms of financial credit facilities. However, this evident logical conclusion that structural changes connected with technological progress require significant changes at the level of money creation and allocation and require higher taxes for the area of the modern manufacturing technologies eliminating human labour, this obvious truth has no chance of bypassing the beliefs of the "New Economy", treated as inviolable political correctness.

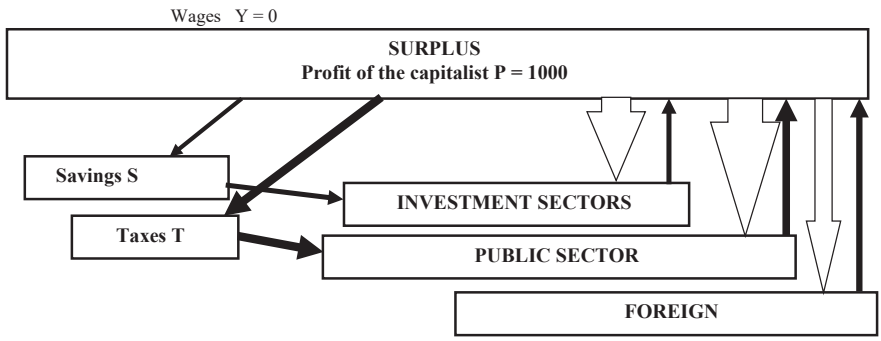

Figure 10. Distributed surpluses and cash flows with zero labour costs

Source: own study.

On the other hand, changing the paradigm and going in the other direction, i.e. increasing the funds transferred to employees (which would reduce the entrepreneur's surplus but also reduce the "problem" of finding a market for it), would mean the need to increase the flows that finance investments and the public sector from employees. In such circumstances, the employees would be the ones that would have to generate the savings and channel them to the financial system, while at the same time taking the risk connected with risky investments, and they would be the ones to pay higher taxes. Such a system seems economically "healthier" for a number of reasons as it would simultaneously build (through savings) the economic position of families, literally millions of ordinary people.

Consequences of the international division of labour

What I have referred to as the surplus nature of a capitalist economy with its structural characteristic that in principle makes it an overproduction-based system also leads to a trivial but highly significant conclusion that every additional product manufactured by a competitor, for instance in a country that has acceded a "community of capitalist countries", can be considered by such a community as a certain barrier to their development. This is obvious because, just like every competition, the supply provided by the acceding country makes it harder to clear the community's own market. This is why such a newly accepted country is not supported in terms of development but instead attempts are made to push it into a specific, secondary role in the international division of labour. The goal is to take over its assets, use it for the community's own gain, thus eliminating competition. The country is treated as a market for the surpluses that others are unable to liquidate within their territories. The role of industry in such a country, once taken over through privatisation, is then brought down to subpar cooperation, i.e. the manufacture of parts and subassemblies for concerns from the dominant countries, and the manufacture is to be as cheap as possible and as such has a low added value, i.e. low wages and profit.

Obviously, real economy produces not only bread; loaves of bread as a metaphor for millions of actually manufactured products become insufficient for a further-reaching structural analysis. In real life, every economy participates in the international division of labour that has emerged in the globalisation process. Analysing what is happening in the modern economy requires examining the manufacturing processes for the **product manufacturing cycle**. The cycle consists of several stages:

- R&D,
- Design works,
- Production works, i.e. the manufacture and assembly of components,
- Marketing works, advertising etc.,
- Distribution and sale.

Each of those stages entails specific spending, costs and the resulting added value, that is a stage-specific ratio of labour costs and profits to the remaining spending and the value of what is being produced at that stage.

The most common situation is where the added value, which comes down to the level of wages and profits, is achieved at the initial and final stage of product lifecycle, while the manufacturing stage in the middle brings the lowest added value, hence the lowest wages and profits at that stage. As a result, the shape of the curve in a graph illustrating the level of the added value achieved at particular stages takes the shape of a convex function resembling a smiling face, which is why it was humorously termed as a "smiling curve". It is depicted in Figure 11.

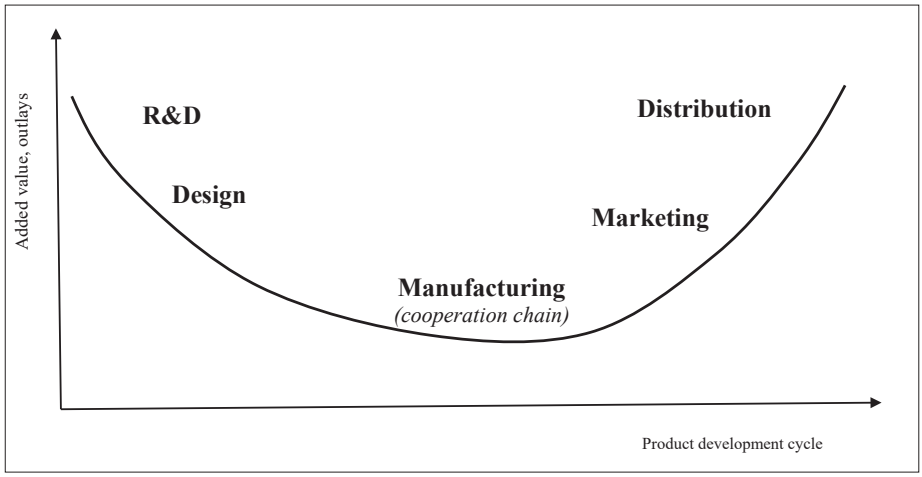

Figure 11. Smiling curve

Source: own study.

In today's world, the process of manufacturing various technologically advanced products in global concerns is located in various places. The international division of labour applies not only to products, like it did in the past, when wine was made only by the French and the Italians as they had vineyards, cotton was made by the British, who sourced materials from their colonies, as described in classic books; it also applies to the manufacture of products that are complex technologically and distribution-wise. Airbus, for example, a European concern, manufactures various aircraft elements in a number of countries in Europe (Germany, France, United Kingdom and Spain) but it has moved some of its production outside of Europe – to the United States, Japan, China and India. The manufacture of many industrial products encompasses various components and parts which are made in various countries. But what matters is that product development cycles take place at the central stage, where wages and profits are the lowest. Besides, it is common knowledge that the stage has been often located

by the dominant countries in third-world countries, and currently also in post-communist countries with a well-qualified workforce and a good industrial base, developed during the communist era.

This, of course, results in low wages, low profits, a secondary role of enterprises and a low propensity to invest because they are not self-reliant and are dependent on orders from the dominant partners. This explains all the low values of the data positioning Poland and other post-communist countries in the lower parts of the presented rankings.

As has already been said at the beginning of this paper: we are rich in what we produce, or, to be more precise, in the value of what we produce. This leads to the logical conclusion that reversing this trend and making Polish people a richer nation requires a policy of bringing full manufacturing cycles back to the Polish economy, so that all stages are handled in our country. We need to create the conditions for developing our own strong concerns[27] and, possibly, taking over the ones that have located their production in Poland while leaving the most profitable stages of the manufacturing cycles in their countries. The task is difficult, though, especially since Poland is still weak capital-wise, especially in the conditions we experience after the integration with the European Union which imposes substantial restrictions as to interference of the state in the economy as this would affect the principle of equal competition.

Pay versus the position of an employee in a company or institution

Another structural aspect related to pay must be addressed which indirectly contributes to its average level: diversification due to the employee's position in the company. Pay is the price for labour, it determines the value of what the person receiving it from the employer gives to the economy – this is a fundamental matter and the starting point. So, as has been demonstrated, our low average pay results from the low average value in what we as a society produce... or perhaps not so much value as the price that the buyers of the results of our work want to pay. After all, the average value is the resultant of individual values, and what an individual receives as pay as a result of the distribution of the produced value should depend on two factors: employee qualifications, experience and position in the organisational hierarchy of the company, the enterprise or institution he

[27] It should be noted that in the 1970s Poland pursued the concept of WOGs (Large Economic Organisations) designed to create strong integrated concerns. Unfortunately, in the 1990s, while implementing an unprofessionally prepared economic reform based on the Washington Consensus, i.e. according to the concept proposed in the late 1980s by the English economist James Williamson for Latin American countries, it was decided that in order for the industry to be privatised, those large organisations must be broken down into tens of small companies focusing on specific parts of their business, as this was supposed to make it easier to sell them.

or she works for. In private businesses functioning according to market terms, pay is usually connected with the responsibility assigned to the employee, and for managerial functions – with the number of employees they are in charge of. For instance, a recently published study[28] shows that salary of a chief accountant in Warsaw corporations ranged, excluding extreme values, from PLN 13,500 to PLN 23,000, while the salary of regular accountants was closer to the national average: from PLN 4,000 to PLN 7,500. CFOs make from PLN 19,500 to PLN 37,000, financial controllers from PLN 12,500 to PLN 20,000, while controlling specialists from PLN 7,200 to PLN 12,000. There are also standard bonuses of 10% to 30% for higher-level positions and 5% to 10% for lower-level jobs. Heads of HR make from PLN 16,500 to PLN 30,000 and recruitment specialists from PLN 4,800 to PLN 8,300. In banks, earnings of directors are in general higher than those of corporate directors: from PLN 24,000 to PLN 38,000, with bonuses from 15% to 40%, while in shared service centres, salaries of directors are approximately 50% higher than in corporations. It should be noted that high salaries of the management in the private sector are partially a consequence of the high risk of losing their jobs: high earnings are to enable them to develop a strong financial standing to have the means to get by if they lose their jobs.

Pay always speaks (or at least it should speak) about the employee's value, how valued they are by the employer, and such evaluation depends on how they contribute to the success of the company. There is an old anecdote about Henry Ford where a work efficiency specialist that he had hired to analyse the functioning of the business identified a weak spot. "I have noticed that there is a man who slacks off, does nothing, whenever I walk across his office I see him in his chair with his legs on the desk napping, he is wasting your money". Ford responded: "He once had an idea that made us save millions of dollars and his legs were in the same place they are right now". The genius industrialist awarded people not for appearances of work but for delivering actual results.

All around the world, as the cited study demonstrated, and also in Poland, a superior in the private sector is usually paid twice or three times of what his subordinate makes. At positions that require education, pays are clearly higher than where education is not needed, which not only stems from the value of the work itself but also has a motivational dimension. Where tuition is covered from one's private funds, education is an individual investment whose cost should be compensated for by the future salary. As a result, the salaries for positions where education is used must be higher – it is a classic market effect. This led to the emergence of the concept of "fair value" (D. Dobija, 2003; M. Dobija, 2008, pp. 3–19), which approaches pay as the effect of outlays in human capital, i.e. expenses that should have a certain rate of return. In contrast, where education is treated as a public good and learning is financed by the state, pay is more

[28] Goldman Recruitment Salary Survey 2018, www.goldmanrecruitment.pl.

egalitarian, less diversified, with non-financial incentives playing a bigger part. This may lead to various organisational and social pathologies resulting from the fact that the state "reimburses itself" for the expenses incurred to educate highly qualified staff by paying them inadequately. However, working at higher positions still entails a greater responsibility and risk, which leads to frustration and dissatisfaction, salaries are seen as unfair and as a result those who are dissatisfied often compensate themselves for the subjectively experienced unfairly low pay by seeking other advantages, including ones that break the law and custom – for example corruption.

This mechanism was observed during the era of socialism but, unfortunately, those structural system problems have remained, just like in an evolving living organism which still has its own genes despite the evolution and those genes are still active, and even if they are dormant, they resume their activity under certain conditions, for example when the organism is weakened. This applies primarily to the public sector, i.e. where the remuneration rules are set by the state. The mechanisms imposed on the public sector, especially the expenditure rule, and the strong political resistance block any attempts to build a reasonable remuneration system for the public sector, especially in institutions financed from the central budget, i.e. education, science, healthcare, central administration, central agencies and institutions, where financing has a political dimension.

The weakest link in development: shaping the structures

At the beginning we reiterated the fundamental economic truth that we are rich as a country in what we produce. In contrast, our prosperity as individuals depends on the national income distribution mechanisms and on our place in the economic system. If we work in an enterprise producing market goods, the essential aspects include what our company manufactures and how the income earned by the enterprise is distributed. According to the rules of statistics, a low average value of wages is determined by the distribution of the variable in the population, the variable depending on what is going on in various enterprises and on the structure of what we produce in those enterprises as a country. As our analysis has shown, the structure is the consequence of the position of our economy in the international division of labour that our country has earned politically. Therefore, if the economy is dominated by handling central stages in the cycle of manufacturing complex, globally produced final products, then the added value, and consequently also wages and profits, must be low. As a result, our trivial model has shown that the ability to create the resources for development and for the financing of the public sphere is low, too. Underfinanced and, as a result, weak, the public sphere is incapable of efficiently pursuing its objectives and tasks; all entrepreneurs know that they can accomplish their business plans only provided

that they have adequate financing, and this principle applies to the public sector as well: it must be supported by appropriate cash flows from taxes to be able to perform its functions to the satisfaction of the citizens.

As our simplified yet useful model has demonstrated, there are certain structural determinants that guarantee balance between the financing of individual consumption needs on the one hand and resources for development and for the public sphere on the other. If the costs of financing the needs of employees are reduced, the public sector must be financed by entrepreneurs as the owners of capital; if employees are to be given a possibility of building their own individual assets and are to be included in the financing of their state and their local governments, employers must pay them more by giving up part of the surplus that represents their profit. It is a trivial observation that economy is a system of communicating vessels; yet the problem of building a proper structure of connections where all channels have the right size and capacity is a non-trivial, highly challenging problem, considering the multitude of possibilities of changing the political and legal constraints. As a result, this is an issue of structural changes in a broader than just the technological sense, as noted by Justin Lin (2017) in his *New Structural Economics*, which focuses on the issues of industrial policy, with an emphasis put on structural issues of national income distribution. This is particularly challenging if economic policies are subject to international interdependencies. There is a need for holistic and coordinated actions as construed by the "new industrial policy" in the context the broader "new structural policy" which captures all the institutional reforms that lead to the desired changes (Nowak, 2017). However, institutional reforms are a matter of politics rather than economics, and they entail the incredibly difficult challenge of shaping integrated development, a challenge as grand as the one we faced after regaining independence 100 years ago (Woźniak, 2019).

Jeffrey Sachs, a prominent economist providing advice at the beginning of the Polish transition period, stated in an interesting speech sent to the 10th Congress of Economists (28–29 Nov 2019) that "the road to prosperity leads through sustainable development". And it is true that development should be sustainable. But it is not what this is about; as we have shown, the road to prosperity involves the manufacture of goods and services of a high added value rather than secondary service production of low added value – and this is the kind of production that has been located in the politically subordinated Poland by the foreign investors that invested here. Professor Sachs loves the fact that they have invested and sees it as a source of our success, but the problem is, which he seems not to notice, that their investments involved mainly privatising, i.e. taking over the post-socialist assets and, as it turned out later, those takeovers were often economically hostile as they led to shutdown of a considerable portion of the industry that was technologically advanced enough to have the potential of yielding a high added value. However, it is not just a matter of added value but something more important: how that value is distributed, how the national income is distributed. Our problem does

not come down simply to the fact that the added value is low but also to the fact that its portion that represents profit is transferred outside the country[29] – last year this was over PLN 130 billion; after subtracting positive transfers (to Poland), we have a balance of PLN -82 billion versus PLN -88 billion in 2018. As we can see, those are enormous amounts that serve neither development not the financing of the public sphere through taxes, and it must be noted that those transfers from Poland increased drastically in 2004: from PLN 8 billion to PLN 30 billion – from 0.97 to 3.18 (versus 4.23 in 2018) percent of GDP. No taxes were paid on those amounts, and even if they were, they were very low and thus unreasonable, serving only as an incentive to attract foreign capital. This situation is a long-term consequence of the conceptual mistakes made in the economic fundamentals of the transition strategy, which lacked ideas for structural reforms, the need for which is understood by Justin Yifu Lin and his Polish colleagues from the Faculty of Management of the University of Warsaw.

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Summary

The level of prosperity available is the value of what is produced in the economy. This is a general truth, while the level of well-being of community members is a consequence of the value added and the rules and mechanisms of national income distribution. The purpose of the paper is to show the macroeconomic principles of the division of the generated GDP value, based on the example of a simple model of the economy in a classic style: the economy is presented as the Great Bakery, which produces loaves of bread shared between employees and its owner, the Baker. The author uses this model to demonstrate the consequences of the division of the generated surplus, which is the Baker's profit from three sources: development-oriented investments and the savings associated with them, the public sector and exportation. The author shows the structural consequences of reducing wages and shifting the tax burdens to the employees. He proves that the reduction of labor costs should be accompanied by an increase in the tax burdens imposed on companies – the Baker in his model. These rules of division have macroeconomic consequences and the author shows the effects for Poland's position in a group of countries, presented as international comparisons (mainly OECD countries). The author shows that one of the key factors determining prosperity is the place of industry in the product development cycles produced by the global division of production. The amount of added value obtained at various stages of these production cycles is illustrated by the so-called smile curve. The author shows the international division of labor has led to the location of the industries of post-communist countries, including Poland, around the minimum of this curve. This causes the average level of wages and, consequently, welfare to be low. The analysis leads to the conclusion that a policy of structural changes is needed, one that will shape this division so that the country regains full production cycles and thus strengthens its economy. The author discusses the simplified thesis formulated by Jeffrey Sachs that sustainable development is the most important for prosperity. The author justifies the thesis that it is not so much development as the amount of added value generated by industry and the mechanisms of its distribution, and points out that, as Justin

Yifu Lin observes, it is the structural changes which will lead to an increase in added value and modifications in the principles of its distribution, so as to increase social well-being.

Keywords: GDP distribution, wages, money, exports, imports, smile curve.

Wynagrodzenia a logika podziału dochodu narodowego w gospodarce rynkowej – opisanej przy pomocy prostego modelu

Streszczenie

Poziom dobrobytu jest określony przez wartość tego, co w danej gospodarce jest wytwarzane. Ale to na poziomie ogólnym, natomiast poziom dobrobytu członków społeczności jest konsekwencją wielkości wartości dodanej oraz zasad i mechanizmów podziału dochodu narodowego. Celem artykułu jest pokazanie makroekonomicznych zasad podziału wytworzonej wartości PKB na przykładzie prostego modelu gospodarki w stylu klasycznym: gospodarka przedstawiona jest jako Wielka Piekarnia, która wytwarza bochny chleba dzielone między pracowników a jej właściciela Piekarza. Autor wykorzystuje ten model dla pokazania konsekwencji podziału wytworzonej nadwyżki, która stanowi zysk Piekarza, między trzy kierunki: prorozwojowe inwestycje, z którymi powiązane jest oszczędzanie, sektor publiczny oraz eksport. Autor pokazuje strukturalne konsekwencje redukcji wynagrodzeń i przesuwania obciążeń podatkowych na pracowników. Dowodzi, że redukcji kosztów pracy powinno towarzyszyć zwiększenie obciążeń podatkowych nakładanych na firmy. Te zasady podziału mają konsekwencje makroekonomiczne i autor pokazuje, jakie są skutki dla miejsca Polski w grupie krajów przedstawianych w porównaniach międzynarodowych (głównie krajów OECD). Autor pokazuje, że jednym z kluczowych czynników decydujących o dobrobycie jest miejsce przemysłu w cyklach rozwoju produktów wytwarzanych w globalnym podziale pracy. Wielkość wartości dodanej uzyskiwanej na różnych etapach tych cykli wytwarzania ilustruje tzw. krzywa uśmiechu. Autor pokazuje, że międzynarodowy podział pracy doprowadził do ulokowania przemysłu krajów pokomunistycznych, w tym Polski, w okolicy minimum tej krzywej. To powoduje, że przeciętny poziom wynagrodzeń, a w konsekwencji dobrobytu, jest niski. Analiza prowadzi do wniosku, że niezbędna jest polityka zmian strukturalnych, które ukształtują ten podział tak, aby kraj odzyskiwał pełne cykle wytwarzania i w ten sposób umacniał swą gospodarkę. Autor dyskutuje uproszczoną tezę sformułowaną przez Jeffrey Sachsa, że dla dobrobytu najważniejszy jest zrównoważony rozwój. Uzasadnia, że nie tyle rozwój, co wielkość wartości dodanej wytwarzanej przez przemysł i mechanizmy jej podziału, wskazują na potrzebę zmian strukturalnych (co dostrzega Justin Yifu Lin), które doprowadzą do zwiększenia wartości dodanej i modyfikacji w zasadach jej podziału tak, aby zwiększyć dobrobyt społeczny.

Słowa kluczowe: dystrybucja PKB, wynagrodzenia, pieniądz, eksport, import, krzywa uśmiechu.

JEL: A00, A10.