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Differentiation of expenditure on health and life insurance in households in 2006–2020

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Abstract

Along with the growing wealth of society, the demand for insurance, including health insurance, increases. In recent years, there has been significant interest in insurance products which guarantee access to private healthcare facilities. The waiting time for an appointment with a specialist is shorter than in public institutions, and such insurance offers quick diagnostics and high-quality services.

The study aimed to determine the level and differentiation of health insurance expenditure in various types of households and its share in total insurance expenses. From 2006 to 2020, as shown by statistics, the highest expenditure on health insurance was recorded in the households of non-manual workers (PLN 19.72 per person per year on average) and the lowest — in farmers' families (8.85 per person per year on average). The indicator of the diversification of insurance expenditure structures for the surveyed households calculated for 2020 showed that farmers' households had a significantly different (various) structure of expenditure on insurance than that observed in other types of households (total $v_{pq} = 0.96$).

Introduction

Expenditure on commercial insurance, both for life and other personal and property insurance, depend on many economic and non-economic factors. The more important determinants include consumer income (Wicka, 2021; Piekut, 2018), consumer insurance awareness (both secondary and primary; Szromnik, 1998a, 1998b, 2001), attitude to time (Maison, 2013), and wealth. The level of disposable income is a factor which influences the standard of living and consumption, but it is not a determinant of household wealth (Perenc, 1998, 2004). Wealth is evidenced by the share of expenses in relation to income. The higher it is, the lower the wealth, since a smaller part of funds can be spent on savings or investments.

The citizens of each country bear private health expenditures. In low- and middle-income countries, along with the increase in the national wealth, the amount of expenditure, mainly from public funds, also increases (Hooley, Afriyie, Fink and Tediosi, 2022). Interestingly, the authors found that spending on health is usually not correlated with having private health insurance — patients may simply cover such expenses directly from household budgets. Nevertheless, private health insurance is popular worldwide, especially in countries where minimal state interference in offering health services is assumed. An important concern in some countries is that private insurance produces a "two-tier" system where patients with higher incomes obtain faster or "better" healthcare than those with lower incomes. While private insurance would likely facilitate faster access to medical treatment were it legal there, it would also likely reduce wait times for patients who rely solely on public insurance, as the patients with private insurance would rely more on resources funded by private insurers and less on ones provided by the government. For example, Canada, where private insurance is not allowed, has the longest wait times for medical services among all high-income countries. There is no consistent evidence that allowing private insurance markets in rich countries results in poorer healthcare outcomes for patients who rely solely on public insurance (Globerman, 2020).

In the USA, where private health insurance is dominant, 80% is employer-sponsored (Wray, Khare and Keyhani, 2021). However, many studies show that people with private health insurance still choose public care, especially in hospital treatment. This is particularly true for younger people and patients without long-term health conditions, which shows that public care is perceived as more reliable and cheaper (Rana, Alam and Gow, 2020). Other studies have found that private health insurance is more likely to be purchased by people with higher education, higher income, and chronic diseases. This means that private insurance is treated as additional, providing additional healthcare or reimbursements for some medical services or costs which are not covered by the National Health Insurance (Hur and Kwon, 2019; Jung, Kwon and Noh, 2022), and in the absence of such insur-

ance, the majority of patients reported unmet medical experience (Lee, 2019). In China, the share of private health insurance premiums increased from 0.2 to 1.4% between 2000 and 2014, but this faced a supply barrier, and private insurance beneficiaries were found to limit their utilization of healthcare services (Wu, Li and Ercia, 2020). It also resulted from the development of public health insurance. Private health insurance is used to provide additional care to the insured. In cases of significant (catastrophic) health expenditures, it does not work, and the most significant burden is placed on public insurance (Jung et al., 2022). There are also reports, e.g., from Korea or Australia, that private health insurance protects households from catastrophic health expenditure, especially for elderly persons and persons with more significant health care needs (Lee and Yoon, 2019). In addition, such insurance can provide better care for chronic diseases (Sriravindrarajah et al., 2020). An important factor in health insurance is people's individual approach to risk, including health risk in a given country (Wicka and Świstak, 2017).

The results of studies on private health insurance were not always conclusive. For example, in the US, patients perceived the level of service for private health insurance as lower than for public insurance (Wray, Khare and Keyhani, 2021). This was the respondents' opinion, although other studies found that prescribing certain medical services to patients in the public health service was up to three times less frequent than in the private sector (Fourquet et al., 2019). Literature review shows that the importance and perception of private health insurance depends significantly on the organization of social insurance in a given country and the level of public health insurance spending. There is no uniform assessment of this phenomenon.

International insurance companies began to offer their services in Poland on a larger scale after Poland acceded to the EU. It was also private voluntary health insurance, which was of little importance in the health insurance system of most OECD countries (Owoc, 2009). It did not matter to the general level of healthcare in a given country, but it increased the availability of medical services (Prędkiewicz, 2014). This is due to, among other things, the fact that having such insurance is often associated with the risk of excessive, unjustified use of medical services, which may result in higher costs (Laskowska, 2015). In Poland, it was believed that private health insurance should be allowed, despite it potentially leading to inequalities in access to healthcare. It was assumed that it will obtain a negligible market share due to the high level of public spending (Jurkiewicz and Trinardon, 2010; Jurkiewicz-Świętek, 2012; Płonka, 2017) and that private health insurance would replace direct private healthcare expenditure (Więckowska and Osak, 2010). However, no studies present long-term changes in private health insurance in Poland. This study aims to fill this gap — it includes both information on the overall share of these types of insurance and information on their use by various groups of households.

The pursuit of satisfying needs, including insurance ones, depends on the financial situation of households. Their activity in the insurance market depends on various factors, including:

— macroeconomic ones: inflation, unemployment, wage levels, interest rates, dynamics of GDP growth, economic situation, legal regulations, etc.;

— microeconomic ones: household size, education, income, place of residence, consumption model, or life priorities (Garczarczyk, Mocek and Skikiewicz, 2014).

After 2015, the financial situation of households in Poland was systematically improving. They achieved higher income (Table 1) and a higher surplus of income over expenditure (Figure 1). They also functioned in larger apartments, better equipped with durable goods (GUS, 2021a).

Table 1. The level of revenues and expenditures in nominal and real terms in 2006–2020

Years	Nominal income in PLN / person / month	Real income (prices 2020) in PLN / person / month	Nominal expenditures PLN / person / month	Real expenditures (2020 prices) PLN / person / month
2006	835	1116	744.81	995.47
2007	929	1211	809.95	1056.13
2008	1046	1308	904.27	1131.59
2009	1114	1347	956.68	1156.69
2010	1193	1406	991.44	1168.34
2011	1227	1386	1015.12	1146.93
2012	1278	1393	1050.78	1144.86
2013	1299	1403	1061.70	1146.44
2014	1340	1447	1078.74	1164.84
2015	1386	1510	1091.19	1188.99
2016	1475	1616	1131.64	1240.50
2017	1598	1718	1176.44	1264.33
2018	1693	1791	1186.86	1255.44
2019	1819	1881	1251.73	1294.29
2020	1919	1919	1209.58	1209.58

Source: Own study based on the Statistics Poland data.

The average monthly disposable income per person in 2020 was PLN 1,919, and in real terms, it was higher by 72.0% than in 2006. The increase of income in the analyzed period occurred in all types of households. The average monthly expenses per person in 2020 amounted to PLN 1,209 and were in real terms 21% higher than in 2006. In the years 2006–2020, a decrease in the share of expenses in income was recorded. It dropped from over 89% in 2006 to 63% in 2020 (26 percentage points). This is a positive phenomenon, as it shows the growing impor-

tance of accumulation and a rising standard of living. It is possible to increase savings from current income. These trends are consistent with the changes occurring in countries with a high level of development (Borowska, Mikuła, Raczkowska and Utzig, 2021; Świecka and Musiał, 2016).

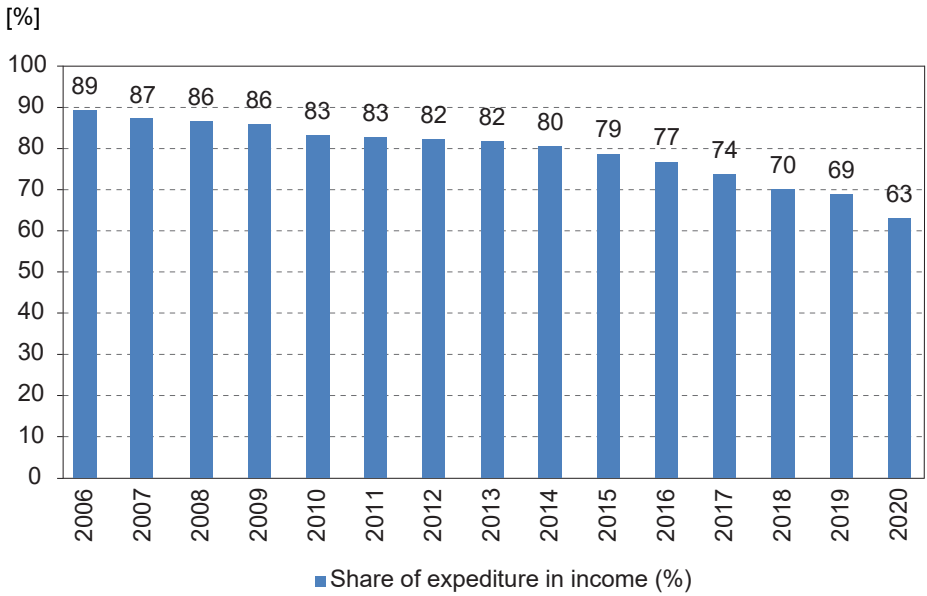


Figure 1. Share of expenditure in disposable income (real approach, 2020 prices) in 2006–2020

Source: own study based on Statistics Poland data.

According to Statistics Poland (SP), in 2020, a large variation in average monthly income and expenditure was observed between different types of households (GUS, 2021b). As in the previous years, the highest average monthly disposable income per capita, and the highest average monthly expenses per capita were recorded in the households of self-employed persons. In this group of households, both income and expenditure were higher by 16.6% and 16.8%, respectively (in 2019, by 19.5% and 17.6%). In 2020, the households of disability pensioners had the lowest average monthly disposable income per person — PLN 1,522, which was 20.7% lower than the average (17.7% lower in 2019). The lowest average expenditure per person was recorded in farmers' households (PLN 840), which were 30.6% lower than the average expenditure for households in general (in 2019 — 27.0% lower).

Research methodology

The aim of the research is to determine the level of expenditure on health insurance in Poland for households of various socio-economic types. Such an ap-

proach makes it possible to identify changes in total health insurance expenditure and indicate how the demand for it differs between households.

The study uses the data published by the Polish Chamber of Insurance (PIU) and Statistics Poland (SP) in the studies of household budget for a relatively long period: 2006–2020 — which should facilitate observing the dynamics of development in the analyzed market. The importance of private health insurance in other countries has been growing over at least a dozen years. In a shorter period, random changes can strongly disrupt the trend observation. In SP studies, insurance expenditure is categorized as follows:

1. Life insurance — life insurance including additional insurance options.
2. Insurance related to living and habitation.
3. Health insurance (private) — accident and sickness insurance.
4. Transport-related insurance (GUS, 2021b).

Due to the subject of the paper, the focus was put on private health-related insurance, i.e., one indicated in point 3.

The data from the following types of households, distinguished according to the socio-economic criterion, were used to study the level and differentiation of health insurance expenditure:

1. self-employed,
2. farmers,
3. workers in blue-collar positions,
4. employees in non-manual positions,
5. retirees and disability pensioners (total).

The following indicators were applied for the data analysis: structure of insurance expenditure, and the share of health-related insurance expenditure in total insurance expenditure. For total insurance expenditure, the rate of changes was determined with the use of the linear function of trend. The level of expenses is set in PLN per person per year. The values were referenced to 2020 prices using the price index of goods and services (inflation).

The diversification of insurance expenditure structures was calculated for 2020 using the expenditure structure diversification index described by the formula:

$$V_{pg} = \frac{1}{2}\sum_{i=1}^{k} |\beta_{ip} - \beta_{iq}|$$

where β_{ip}, β_{iq} denote, respectively, the share of the i-th structure component in the p-th and q-th type of households (k is the number of distinguished structure components, i.e., groups of expenses). Certainly, the components β_{ip}, β_{iq} satisfy the relation $0 \leq \beta_{ip} \leq \Sigma_{i=1}^{k} \beta_{ip} = 1$. The measure takes a value in the range [0;1]. When the compared structures are identical, then $v_{pg} = 0$. The increasing structural differences are accompanied by the increase of v_{pg} up to unity (Walkosz, 2009). On the basis of individual v_{pg} indices, the total expenditure diversification index was

estimated. With the use of this indicator, it is possible to determine to what extent the structure of insurance expenditure in a given type of household differs from that in other types.

Private health insurance and its importance in the healthcare system

Health insurance is a service aimed at protecting and maintaining health, as well as treating emerging ailments. The insurance model is historically the oldest system of financing healthcare, and its main source of financing are premiums paid by entities covered by compulsory health insurance (Wielicka, 2014).

In Poland, health insurance of employees is compulsory (the so-called Bismarck model). A feature of this model is financing the healthcare sector from obligatory health contributions paid by the employer and the employee. The Bismarck model assumes the existence of health insurance institutions. Elements of this system can be identified in such countries as: Germany, Austria, Belgium, France, the Netherlands, Poland, and Switzerland (Sobieski, 2020).

There are currently two main types of health insurance in Poland:

1. compulsory health insurance — public insurance based on monthly contributions to a public fund,

2. voluntary health insurance — i.e., private health insurance which can be financed either from the funds of the person concerned by the protection itself or, for example, by the employer as a non-wage benefit.

Private health insurance may play various roles in healthcare systems of different countries. They can be the basis when there is no public system, but also complement the public system or appear in parallel (PIU, 2013). Due to its functions, private health insurance can be divided into:

1. substitution insurance — the purpose of which is to provide healthcare to people excluded from the public healthcare system or to those who resign from it, provided they take out private insurance that meets at least the standards of the public one. This type of insurance is offered, for instance, in Portugal;

2. complementary insurance — provides coverage of costs resulting from the use of benefits which are not reimbursed from public funds, and coverage of statutory fees for partially reimbursed benefits. Such health insurance functions, e.g., in Belgium;

3. supplementary insurance — its aim is to provide a higher standard of medical services than that offered by the public system. It is a voluntary insurance, the purchase of which does not exempt from the obligation to participate in the costs covering functioning of the public health service. This is the case for additional health insurance in Poland;

4. basic insurance — provides citizens with access to medical care in a situation where the state does not organize it as a public system. This, for instance, concerns health insurance in the USA.

Despite the systematic increase in funds allocated to health care, access to health care, in the opinion of the Poles, is too small and dissatisfaction with the functioning of the system persists. According to Statistics Poland, in 2020, current public and private spending on health care amounted to PLN 165.7 billion. To compare, in 2019, expenditure on health care amounted to over PLN 147 billion, of which nearly 29% was private expenditure (29.7 billion was direct expenditure of households; GUS, 2019). Compared to 2006, there was a significant increase in these expenses. At that time, they were two times lower (Table 2).

Table 2. The main items from the National Health Account 2006 and 2019

Healthcare expenditure category	In bln PLN		Dynamics (2006 = 100)
	2006	2019	
Total healthcare expenditure	62.057	147.839	238
Public expenditure	42.968	106.114	247
Private expenditure, including	19.089	41.725	219
household direct expenditure	16.821	29.702	177

Source: Own study based on SP data (GUS, 2007; 2020).

An increase in expenditure on health care from public funds and contributions does not translate into an improvement in the opinion on the quality of these services. According to the data from CBOS public opinion polls (CBOS, 2021), two out of three respondents were dissatisfied with the operation of health service in Poland. The weakest points are: little access to effective prophylaxis, limited access to specialists and diagnostic tests. The health debt created in this way, according to some, increased significantly during the COVID-19 pandemic (PIU, 10.02.2021).

Healthcare in Poland is partly co-financed by private citizens. This is demonstrated both by the data of the Statistics Poland (health expenses, health insurance expenses) and data from entities offering private medical services (e.g., Luxmed, Enelmed, Medicover) and insurers selling private health insurance.

It is believed that in Poland, private health insurance serves not only to ensure access to a comfortable medical service. In a situation where the waiting time for visits not only to specialists, but also to primary care physicians is significantly longer and many rehabilitation services are expected to take several months, more and more often private insurance or spending on health replaces the public health service. However, it is connected with higher expenses. In addition to paying the obligatory health insurance contribution, one should pay expenses for a medical package (PLN 150–300) or for additional health insurance (about PLN 100–300 per month). One can also pay for private doctor visits or specific treatments, often PLN 200 or more per visit, depending on the specialization.

Private health insurance can be purchased from an insurer offering such products, chosen by an individual or their employer. Agreements are usually signed for a year, and the amount of the premium paid depends, i.a., on the scope of protection offered under the policy. Private health insurance usually covers:

— medical insurance — outpatient treatment,

— hospital insurance — hospitalization in a facility with a higher standard or in a private hospital,

— medical treatment insurance — reimbursement of costs resulting from treatment.

Private health insurance is bought by the Poles increasingly often. According to the data collected by the Polish Chamber of Insurance, in 2021, 3.7 million people had health insurance policies. For comparison, it was 3.1 million in 2020. During the year, the value of the private health insurance market increased from PLN 665 million to PLN 760 million. As Redmerska (2022) notes, private health insurance covers more and more people, also from outside large cities, and packages which include access to primary care physicians and several specialist doctors are gaining popularity. The main reason for purchasing such policies is their relatively low price, easier access to a general practitioner, as well as faster diagnostics than in the public health service. The enrichment of the health insurance offer with services related to primary healthcare, consultations with internists and pediatricians was a response to the changing needs of consumers in an epidemic situation (PIU, 10.02.2021).

For several years, the health insurance market has seen a steady increase in sales of group policies. According to the PIU data (10.02.2021), the share of group health insurance in the entire insurance portfolio exceeds 75%. Most of the policies owned by the Poles are benefits financed partially or entirely by employers (PIU, 8.04.2019). However, there has been an increase in the number of people who pay for health insurance themselves, even though it is still merely a fraction of all customers. This results in the inability to comprehensively diagnose the growth of the health insurance market only on the basis of data from individual consumers, obtained, for instance, in household budget surveys.

Changes in household expenditure on health-related insurance and its share in insurance expenses

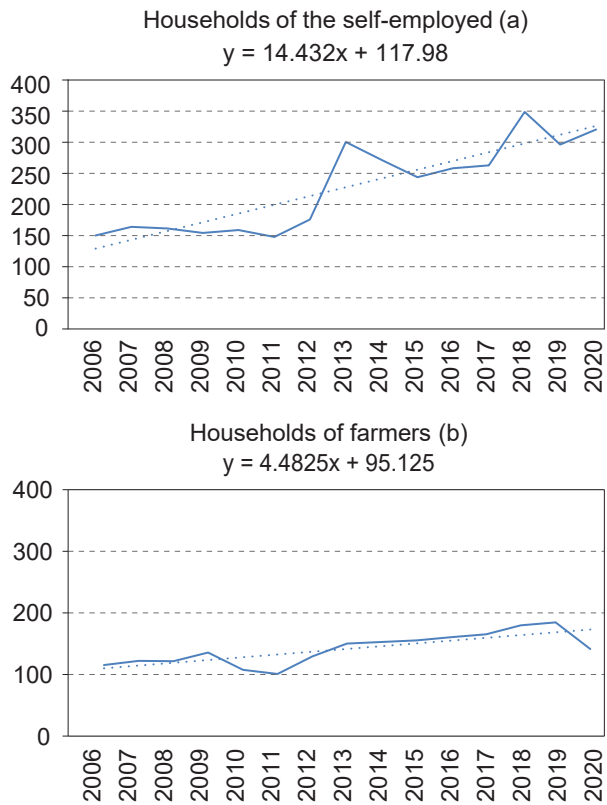
The literature on the subject presents various criteria for the division of households. These criteria may be, for instance, biological, related to the level of education or place of residence. In this paper, households were categorized in terms of the socio-economic groups they belong to, in line with the classification used in the *Households Budget* publication (GUS, 2018b). Decisions related to the purchase of insurance, saving, investing, spending, and crediting are of interest to broadly

understood household finances. The decisions in this area are influenced not only by the level of income, but also by the financial management itself, which results from financial education. Households are significant players in the financial services market, including insurance (Campbell, 2006; Swart, 2007; Garman, Hampshire and Krishnan, 2008; Garman and Forgue, 2014) — but not every insurance group.

In the years 2006–2020, total expenses for the purchase of insurance varied depending on the type of household. On average, the largest amount of money was spent on purchasing insurance per capita in the households of non-manual workers (over PLN 266), then in self-employed households (PLN 233), and the least in the households of blue-collar workers (PLN 119).

The trend function was used to assess the growth rate of total insurance expenditure in households. The average real expenditure growth rate was annually:

a) PLN 14.43 — for the self-employed,
b) PLN 4.48 — for farmers,
c) PLN 8.79 — for workers employed in blue-collar positions,
d) PLN 12.09 — for employees working in non-manual positions,
e) PLN 15.21 — for retirees and disability pensioners.



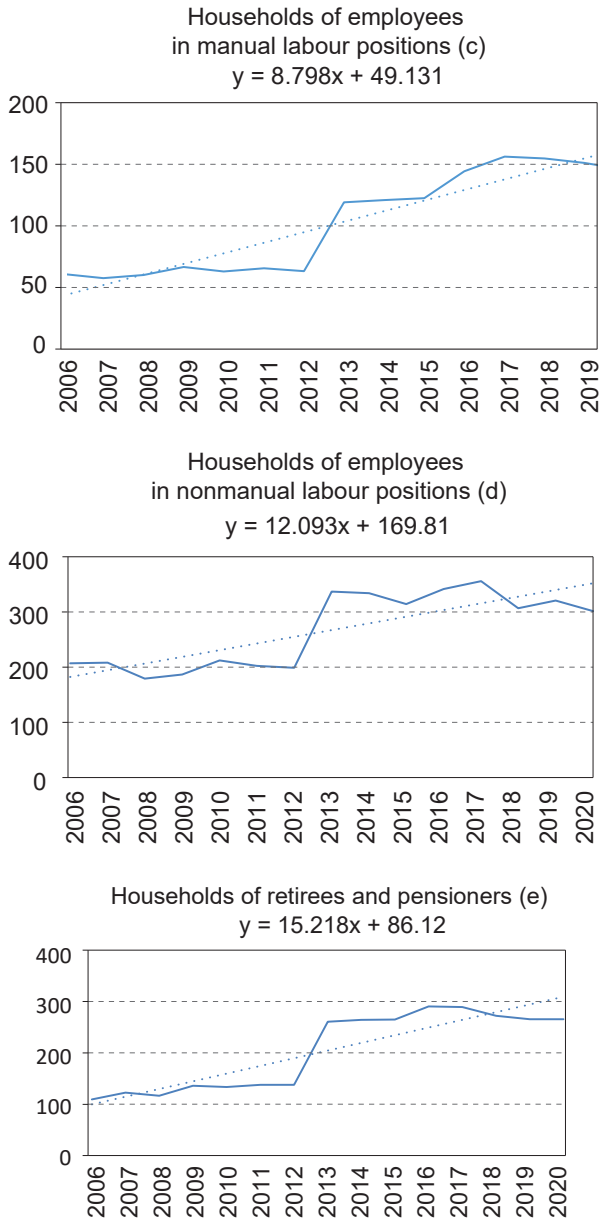


Figure 2. Tendency of total insurance expenses (real expenses, 2020 prices) in households by socio-economic type in 2006–2020

Source: Own study based on SP data.

Health insurance is separated as one of the four categories of insurance-related household expenditure reported by the Statistics Poland. In the years 2006–

2020, health insurance expenses varied significantly depending on the type of household (Table 3).

Table 3. Realized level of household expenditure on health-related insurance (prices in 2020) in PLN annually per person

Years	Households of the self-employed	Households of farmers	Households of employees in manual labor positions	Households of employees in non-manual labor positions	Households of retirees and pensioners
2006	16.84	11.87	20.69	31.60	12.35
2007	14.86	12.52	16.59	29.89	12.67
2008	17.72	12.76	15.77	26.73	13.36
2009	16.10	10.16	14.80	22.20	13.35
2010	16.69	8.77	13.86	24.61	10.61
2011	15.05	7.59	12.34	21.56	12.34
2012	14.51	8.24	12.16	22.36	10.20
2013	17.23	10.24	11.14	19.70	11.27
2014	13.48	9.72	11.66	19.83	11.66
2015	16.34	9.94	10.72	20.01	12.55
2016	13.81	8.29	9.87	10.26	4.87
2017	13.67	4.64	9.93	11.74	6.32
2018	12.19	7.62	6.22	10.79	6.47
2019	13.03	4.72	6.08	14.15	6.20
2020	10.56	5.64	5.76	10.44	5.88

Source: Own study based on SP data.

The highest level of expenditure on health insurance in all the analyzed years was recorded in non-manual workers' households. On average, it was over PLN 19 per person per year; the highest amount was observed in 2006 (over PLN 31 per person per year), the lowest — in 2016 (around PLN 10). Among the groups of households, farmers spent the least on health insurance — the average in this case was over PLN 8, which was more than two times less than the amount spent by households for non-manual workers. In farmers' households, the highest expenses were incurred in 2008 (over PLN 12 per person per year), and the lowest — in 2019 (PLN 4.7). There was a volatility in the level of health insurance spending over the analyzed 15 years. In order to determine the change by type of household, the range was calculated (Table 4).

Table 4. Breakdown of health insurance expenditure in 2006–2020 by the type of a household (in PLN per person per year)

Specification	Households of the self-employed	Households of farmers	Households of employees in manual labor positions	Households of employees in non-manual labor positions	Households of retirees and pensioners
Mean	14.81	8.85	11.84	19.72	10.01
Minimum	10.56	4.64	5.76	10.26	4.87
Maximum	17.72	12.76	20.69	31.60	13.36
Range	7.16	8.12	14.93	21.34	8.50

Source: Own study based on SP data.

The largest differences between the highest and the lowest level of expenditure on health insurance in the analyzed years occurred in the households of non-manual workers (PLN 21.34), and the lowest in self-employed households (PLN 7.16). Households of employees holding non-manual workers are also households allocating the largest sums for the purchase of insurance in the analyzed years in general.

In the years 2006–2020, the share of expenditure on health insurance in the total expenditure on the purchase of insurance in individual types of households changed. The data illustrating this issue is presented in Table 5. The most important item in the structure of household insurance expenses, both in 2006 and 2020, was transport-related insurance (including third party liability insurance for motor vehicle owners). Their share in total expenditure on insurance exceeded 40%, and even 60% in households of farmers and the self-employed (GUS, 2007, 2021). Another important item in the total insurance expenditure was the purchase of life insurance. In all types of households, except for farmers' households (16.85%), their share in expenditure on insurance was over 40%. The funds earmarked for the purchase of private health insurance constituted only 3–4% of the expenditure earmarked for the purchase of insurance in most types of households, and in the households of retirees and pensioners it was only 2%. The shares of health insurance expenditure are comparable to the item in the structure of total expenditure in 2020 as regards such categories as: alcoholic beverages and tobacco products (2–3%), purchases related to personal hygiene (2.6–3%). It is worth mentioning that in 2020, 4–8% of the expenditure, depending on the type of household, was allocated to the total expenditure recorded in the "health" category.

Table 5. Share of annual health insurance expenditure in total insurance expenses in 2006–2020

Item	Share of health insurance expenses in total insurance expenses in years (%)														
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Households of the self-employed	10.9	8.8	10.7	10.2	10.3	9.9	8.0	5.6	4.8	6.5	5.2	5.1	3.4	4.3	3.2
Households of farmers	11.3	11.2	11.5	8.1	9.0	8.4	6.9	7.3	6.8	6.9	5.5	3.0	4.5	2.7	4.3
Households of employees in manual labor positions	27.3	22.9	21.0	18.1	17.8	15.3	15.6	8.2	8.5	7.7	6.1	5.7	3.6	3.6	3.5
Households of employees in non-manual labor positions	15.3	14.4	14.9	11.9	11.6	10.7	11.3	5.9	5.9	6.4	3.0	3.3	3.5	4.4	3.5
Households of retirees and pensioners	11.1	10.2	11.3	9.64	7.8	8.79	7.29	4.26	4.34	4.66	1.65	2.15	2.34	2.3	2.18

Source: Own study based on SP data.

According to the data from *Household Budget*, in the analyzed years, the largest share of health insurance expenditure in insurance purchases was for households of blue-collar workers, which amounted to an average of 12%, with a maximum of 27.3% and a minimum of 3.5%. The discussed social group made purchases of health insurance for relatively large amounts in relation to the funds spent on the purchase of other insurance. The smallest share was recorded in the households of retirees and disability pensioners — 6%, and ranged from 1.6% in 2016 to 11.27% in 2008. It is worth emphasizing that farmers and entrepreneurs, if they act as private persons, incur expenses for insuring resources involved in

professional activities and production. Therefore, we cannot entirely separate expenses for private health insurance from health insurance paid by enterprise, as entrepreneur and worker is the same person. Additionally, health insurance may be delivered within the complex insurance package bought by an enterprise (Wicka and Leśniewska, 2017; Wicka, 2018).

In the next stage of the analysis, the expenditure structure diversification index was determined on the basis of data from 2020. The types of households were determined, which differed most from the others in terms of the structure of insurance expenditure (total). For this purpose, individual indicators of structure differentiation were written in the form of a symmetrical matrix with dimensions of 5 × 5 (five types of households) and are presented in Table 6. The sixth column of the matrix presents the sums of structure indicators for individual categories of households.

Table 6. Matrix of indicators of diversification of insurance expenditure structures for 2020

p \ q	1	2	3	4	5	∑
1	0.0000	0.0136	0.2490	0.0379	0.0873	0.39
2	0.0136	0.0000	0.1392	0.2783	0.0738	0.50
3	0.2490	0.1392	0.0000	0.2783	0.2936	0.96
4	0.0379	0.2783	0.2783	0.0000	0.0494	0.64
5	0.0873	0.0738	0.2936	0.0494	0.0000	0.50

p — numbers of individual types of households: 1 — employed as blue-collar workers, 2 — employed as non-manual workers, 3 — farmers, 4 — self-employed, 5 — pensioners together

Source: Own study based on SP data.

In 2020, expenses differed to the greatest extent from other structures of expenditure on insurance in farms (total = 0.96). It is worth mentioning that in 2020, farmers' households were characterized by the lowest level of total insurance expenditure and the lowest level of health insurance expenditure. When analyzing the structure of expenses incurred by farmers for the purchase of insurance in 2020, one can notice a significantly lower share of expenses on life insurance (16.8%) in relation to other types of households (over 40%). Among all the analyzed types of households, the structure of insurance expenditures in blue-collar households is the least different from the structure of insurance expenditures in other types of households (0.39).

Conclusions

Based on the analyses, the following conclusions can be drawn:

— In the years analyzed, the total customer demand for health insurance grew in terms of quantity and value. According to the data of the Polish Chamber of Insurance, 3.7 million Poles had health insurance policies at the end of 2021, com-

pared to 3.1 million in 2020. In the same period, the value of the private health insurance market increased from PLN 665 million to PLN 760 million.

— The largest amount for the purchase of health insurance in the years 2006–2020 was incurred in the households of non-manual workers (average PLN 19.72 per person per year), and the lowest in farmers' households (average PLN 8.85 per person per year).

— Expenses for the purchase of health insurance constituted the largest share in the total expenses for the purchase of insurance in the households of blue-collar workers. In the years 2006–2020, it was 12% on average.

— The most diverse structures of expenditure on insurance in general in 2020 were observed in farmers' households (total = 0.96), and the least diversified in workers' households (total = 0.39).

The present study is subject to certain limitations. First, there are no consistent data on health expenditure in households; it is therefore difficult to establish whether insurance is a substitute for direct private health expenditure. The second limitation is that health insurance is presented against the total insurance expenditure, which may make interpretation difficult for people who are strictly interested in healthcare. Motor insurance prices, for example, have risen sharply in recent years, leading to an increase in their share.

Further studies should determine the level and structure of health insurance expenditure individuals and employers incur. This will allow researchers to better recognize the development trends and the importance of this insurance.

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