

Andrzej Baranowski*

**THE SHARE OF HOUSEHOLDS IN PURCHASES OF GOLD
IN THE LIGHT OF SOCIO-DEMOGRAPHIC RESEARCH**

Introduction

In the first years of this century, alarming tendencies in customers' behavior have been revealed in the jeweler's market segment. Along with a decline in the market demand for jewellery offered on the primary market, an increase in the supply and sales of gold offered by physical persons on the secondary market has been observed. It needs to be emphasized that despite its social significance there is hardly any professional Polish or foreign literature related to the jeweller's and goldsmith's sector. On account of that, there are no references made to other sources or bibliography in this analysis. Since there are no data concerning the sales of gold on the domestic market available from any office in the country, the Author was not able to use them in his research work. Despite the difficulties, an attempt has been made to establish the causes and effects of behaviors of present and future participants in the gold market acting as both sellers with their own subject offer and purchasers.

The market research was empirical in nature and included 1496 respondents who met the following criteria: from January 01 to December 31, 2005, they visited one of the selected jeweler's outlets within the country, were householders or co-householders, and voluntarily agreed to take part in the survey. Each respondent was asked to answer 18 questions included in a survey. In their subject-matter, the questions referred to purchases of gold made, intentions to acquire gold as well as respondents' sex, age, education, professional status or place of residence.

The study of consumer behaviors concerning the gold market segment has been made according to the following procedure:

* The author is preparing a PhD thesis in the Chair of Banking at the University of Economics in Poznań under the supervision of Prof. Dr. Hab. Alfred Janc.

Stage I . Research design

1. Formulation of the research problem;
 - determination of the research aim and object
 - relation of the selected problem to the present knowledge
2. Specification of the scope of study;
 - object (selection of the observed indications of consumer behaviours on the primary and secondary gold market)
 - subject (determination of the socio-demographic and economic features which will form the basis for the identification of the research subjects)
 - space (determination of time in which the study will be conducted as well as the period which the analysis will cover)
3. Formulation of research hypotheses
4. Sources and methods of primary information collection;
 - determination of the study units, sample volume and methods of sample selection
 - selection of measuring methods and techniques
 - development of the research tools (the questionnaire)

Stage II. Research implementation

1. 1. Measurement of primary sources;
 - technical preparation and organization of the field research
 - selection and training of pollsters
 - coordination and supervision of the field research
 - formal and factual verification of the collected data
 - data categorization and encoding for the purpose of database creation
2. Quality and quantity analysis of the information gathered
3. Interpretation of the results obtained

Stage III. Presentation of results

The article aims to present the results of an analysis of one of the research problems, namely the identification of respondents in the light of socio-demographic research according to purchases of gold made or not made in the years 2004–2005 and their intention to purchase gold in the future.

For this purpose, two research hypotheses have been assumed. The first of them was that the demand for gold and its products in the analysed period revealed a downward tendency. The other one was that socio-demographic factors diversified customers in their decisions to

purchase gold.

Methods of examining empirical sources with the use of quality methods in the description and conclusion-making concerning the interrelationships and structure of the examined phenomena have been applied. The source for the empirical analysis was composed of the Author's original materials based on the survey prepared. The statistical observation was performed by means of the method of partial observation, unqualified estimate, a questionnaire addressed to the customers of selected jeweler's shops within the country (deliberate selection) as well as a survey conducted at the jeweler's shop run by the Author of this publication.

This publication consists of four chapters. Chapter 1 presents the dynamics of purchases made and intended. Chapter 2 contains relationships between intended purchases of gold in relation to purchases made, whereas Chapter 3 sets forth relationships between intended and not made purchases. Chapter 4 presents, from a statistical perspective, connections between gold purchases made and not made, and an intention to purchase or lack thereof in relation to respondents, according to socio-demographic features.

1. Purchase tendencies on the gold market in Poland

Data concerning the purchase of gold seem to indicate that in the analysed period 2/3 of the people surveyed (66.44%) constituted a group that was active in purchasing gold. Within this group, 36.56% of the respondents purchased gold and 29.88% declared their intention to acquire gold in the future (see table no. 1). The index of the purchase dynamics in total (that is the ratio of intended purchases to made ones) was 81.72%, which indicates a downward tendency for the purchase of gold.

Table 1. Respondents according to gold purchases made and intended and their socio-demographic features

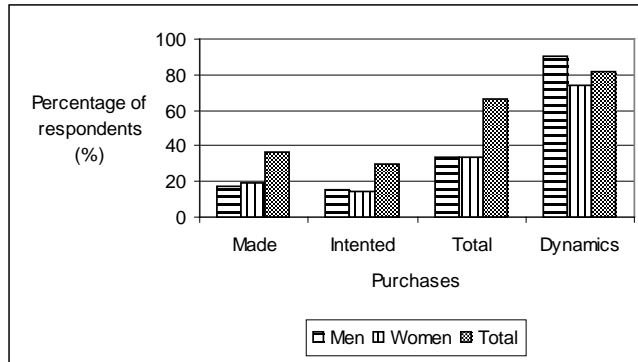
Socio-demographic features	PURCHASES OF GOLD			
	Total	Made	Intended	Dynamics
	<i>In percentage</i>			
Total	66,44	36,56	29,88	81,72
Sex of respondent				

– man	33,22	17,44	15,78	90,42
– woman	33,22	19,12	14,10	73,78
Age of respondent				
– 18–25	14,44	7,89	6,55	83,05
– 26–45	21,99	14,37	7,62	53,02
– 46–60	16,78	8,22	8,56	104,07
– 61 and over	13,23	6,08	7,15	117,58
Respondent's level of education				
– primary	6,62	2,94	3,68	125,00
– vocational	10,83	5,48	5,35	97,56
– secondary	23,26	13,17	10,09	76,65
– higher	25,73	14,97	10,76	71,88
Professional status				
– unemployed person	–	–	–	–
– pensioner	17,45	9,36	8,09	86,43
– private sector*	28,47	14,57	13,90	95,41
– public sector	20,52	12,63	7,89	62,43
Place of residence				
– <10.000	9,02	4,48	4,54	101,49
– 10.001–50.000	15,84	8,22	7,62	92,68
– 50.001–100.000	18,32	9,16	9,16	100,00
– > 100.001	23,26	14,71	8,55	58,17
* including-business activity and agriculture				

Source: own study.

A difference in the consumers' behaviors concerning the purchases made and intended has also been found depending on the sex – chart 1. Noticeably, more men (dynamics of 90.42%) than women (dynamics of 73.78 %) declared to purchase gold in the future. The percentage of men according to the purchases made was 17.44% and intended – 15.78%, whereas the dynamics in relation to women was 19.12% and 14.10%, respectively.

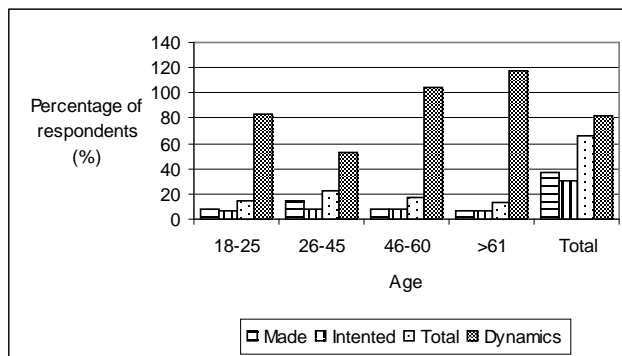
Chart 1. Purchases of gold made and intended according to the dynamics and sex of respondents



Source: own study.

The consumers' age had a considerable influence on the planned purchases of gold, their personal needs as well as the needs of their own households – chart 2. The oldest group of respondents, aged over 60 (117.58%), and customers aged 46–60 (104.07%) revealed the highest activity level to purchase gold in the future. In the youngest group aged 18–25, the dynamics index (83.05%) was slightly higher than the average. Middle aged people, between 26 and 45, showed the lowest level of interest (53.02%) in the prospective purchase of gold.

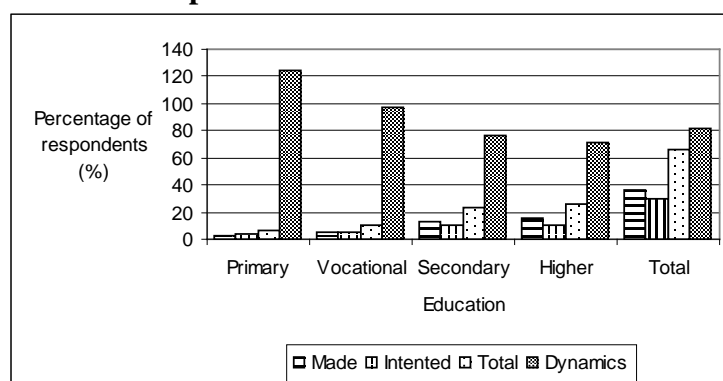
Chart 2. Purchases of gold made or intended according to the dynamics and age of respondents



Source: own study.

Like age, consumers' level of education also had an impact on their plans to purchase gold – chart 3. An increase in the number of customers planning to purchase gold occurred only among people with primary education and amounted to 125.00%. In other groups, purchases were planned by 97.56% of people with vocational education, 76.65% of people with secondary education and by 71.88% of people with higher education. The above indexes seem to indicate that the interest in the purchase of gold has decreased together with an increase in the level of customers' education. Presumably, the real drop in the gold value on the investment market, and on the secondary market in Poland in particular in the above period, caused a decrease in the interest to invest money in gold among people with higher education due to the fact that this group of customers assessed prospective profits from such investments as average.

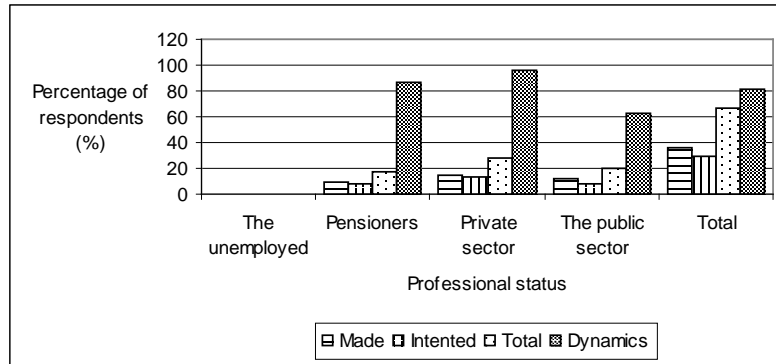
Chart 3. Purchases of gold made and intended according to the education level of respondents



Source: own study.

As far as the professional status of the respondents is concerned, it seems to have had a limited impact on the customers' behaviors – with the exception of the unemployed people who were not in 100% interested in purchasing gold – chart 4. The majority of customers who declared their intention to acquire gold in the future belonged to the private sector. The dynamics index for this group was 95.41%. In the group of pensioners the index number was 86.43%, whereas in the group of the public sector it was the lowest and amounted to 62.43%.

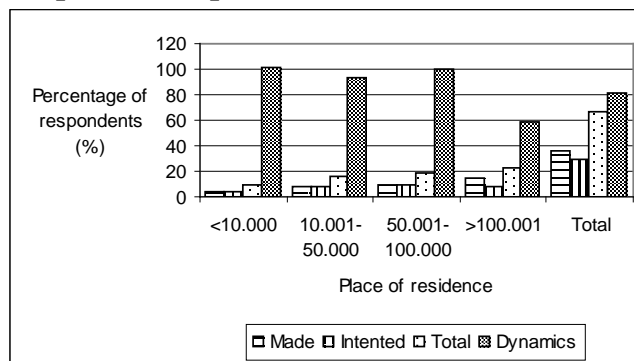
Chart 4. Purchases of gold made and intended according to the dynamics and professional status of respondents



Source: own study.

The place of the respondents' residence considerably diversified the dynamics indexes of intended purchases of gold (chart 5). Only a slight increase in the number of people planning to purchase gold in the future occurred among residents of towns or villages up to 10 thousand inhabitants (101.49%). Stagnation occurred – index 100%-among residents of towns with a population between 50 and 100 thousand people. The lowest decline (92.68%) was observed among respondents from towns with a population between 10 and 50 thousand inhabitants, whereas the highest one (58.18%) was found among residents of the biggest towns or cities, with a population of over 100 thousand.

Chart 5. Purchases of gold made and intended according to the dynamics and place of respondents' residence



Source: own study.

2. Purchases of gold made or intended

The analysis here aimed to forecast the prospective behaviors of customers who have purchased gold, the so-called “Purchasers”. The research results seem to suggest that every other purchaser of gold (50.46%) intended to acquire it in the nearest future – table 2.

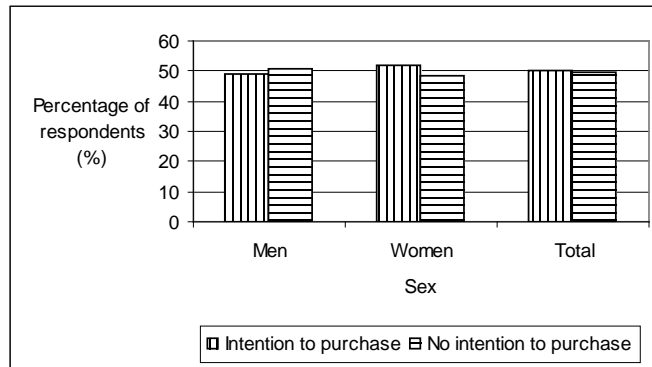
Table 2. Purchasers of gold according to an intention to purchase as well as socio-demographic features

Socio-demographic features	Purchases of gold made	Intention to buy gold	
		YES	NO
		<i>In percentage</i>	
Total	100,00	50,46	49,54
Sex of respondent			
– man	100,00	49,04	50,96
– woman	100,00	51,75	48,25
Age of respondent			
– 18–25	100,00	55,08	44,92
– 26–45	100,00	34,42	65,58
– 46–60	100,00	70,73	29,27
– 61 and over	100,00	54,95	45,05
Respondent’s level of education			
– primary	100,00	61,36	38,64
– vocational	100,00	65,85	34,15
– secondary	100,00	34,01	65,99
– higher	100,00	57,14	42,86
Professional status			
– unemployed person	–	–	–
– pensioner	100,00	41,43	58,57
– private sector *	100,00	61,47	38,53
– public sector	100,00	44,44	55,56
Place of residence			
– <10.000	100,00	49,25	50,75
– 10.000–50.000	100,00	42,28	57,72
– 50.001–100.000	100,00	60,58	39,42
– > 100.001	100,00	49,09	50,91
* including-business activity and agriculture			

Source: own study.

The respondents' sex had only a slight influence on their purchase decisions. 49.04% of men and 51.75% of women declared an intention to purchase gold. The indexes reveal almost identical preferences of both sexes – chart 6.

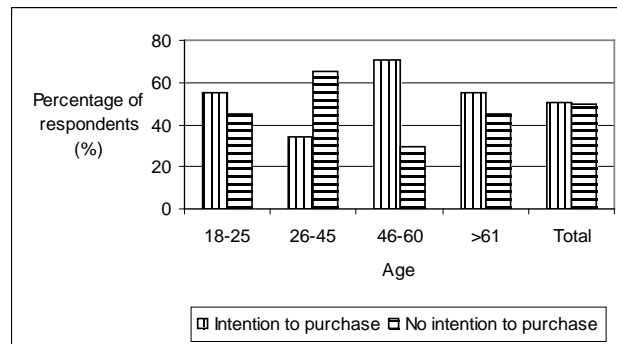
Chart 6. Purchasers according to an intention to buy gold and sex



Source: own study.

The purchasers' age had a significant impact on their intentions to buy gold in the future. People aged 46–60 constituted the highest percentage of purchasers who plan to buy gold in the future (70.73%). The next group was composed of the youngest people aged 18–25, (55.08) followed by a group of the oldest respondents, over the age of 60 (54.95%). The lowest percentage (34.42%) occurred among people aged 26–45 – chart 7.

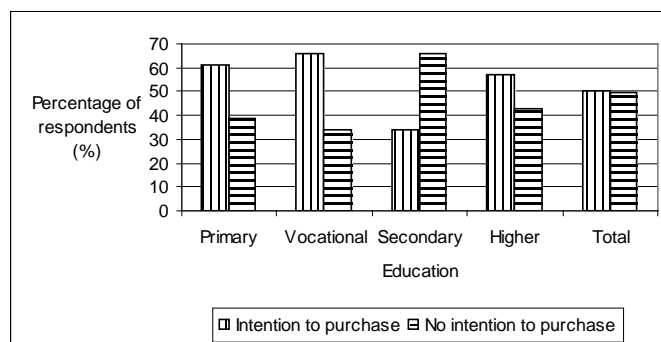
Chart 7. Purchasers according to an intention to buy gold and age



Source: own study.

From the results obtained, it may be concluded that the level of the respondents' education had an impact on their decisions concerning their plans to purchase gold in the future (chart 8). There was a greater interest in acquiring gold in the future among people with vocational (65.85%) and primary (61.36%) education, and slightly lower (57.14%) among respondents with higher education. The lowest percentage (34.01%) was characteristic of individuals with secondary education.

Chart 8. Purchasers according to an intention to buy gold and level of education



Source: own study.

As far as the professional status of the respondents is concerned, it was found that the highest percentage of purchasers (61.47%)-willing to buy gold-occurred among customers from the private sector. Employees of the public sector (44.44%) and pensioners (41.43%) showed a considerably lower interest in acquiring gold. It needs to be emphasized that the unemployed respondents revealed no interest in buying gold at all (chart 9).

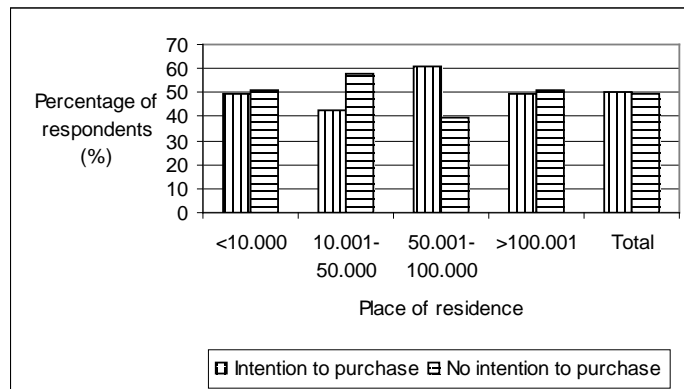
Chart 9. Purchasers according to an intention to buy gold and professional status



Source: own study.

The place of the respondents' residence had a moderate impact on their intention to acquire gold in the future – chart 10. The highest percentage of the respondents declaring their willingness to buy gold was among residents of big towns or cities with a population between 50 and 100 thousand (60.58%). The level of interest of people living in towns or villages up to 10 thousand, and in cities over 100 thousand was almost identical (49.25% and 49.09% respectively). Residents of medium-sized towns, between 10 and 50 thousand, showed a slightly lower interest (42.28%).

Chart 10. Purchasers according to an intention to buy gold and place of residence of respondents



Source: own study.

3. Planned purchases of gold

Here we concentrate on finding the answer to the question about the future forecasts concerning the purchase of gold by customers who have not acquired gold at all. The results of our analysis seem to indicate that only 18.02% of the consumers, who have not purchased gold, are going to acquire it in the nearest future – table 3.

Table 3. Non-purchasers of gold according to an intention to acquire it and their socio-demographic features

Socio-demographic features	Purchases of gold unmade	Intended purchases of gold	
		YES	NO
<i>In percentage</i>			
Total	100,00	18,02	81,98
Sex of respondent			
– man	100,00	17,70	82,30
– woman	100,00	18,58	81,42
Age of respondent			
– 18–25	100,00	20,00	80,00
– 26–45	100,00	11,76	88,24
– 46–60	100,00	19,43	80,57
– 61 and over	100,00	24,46	75,54
Respondent's level of education			
– primary	100,00	20,74	79,26
– vocational	100,00	12,56	87,44
– secondary	100,00	16,34	83,66
– higher	100,00	35,48	64,52
Professional status			
– unemployed person	100,00	–	100,00
– pensioner	100,00	22,18	77,82
– private sector *	100,00	36,82	63,18
– public sector	100,00	18,48	81,52
Place of residence			
– < 10.000	100,00	22,29	77,71
– 10.001–50.000	100,00	13,78	86,22
– 50.001–100.000	100,00	23,18	76,82
– > 100.001	100,00	18,35	81,65

* including-business activity and agriculture

Source: own study.

As regards to sex, fewer men (17.70%) than women (18.58%) declared the intention to acquire gold as compared with the general percentage at the level of 18.02% – chart 11.

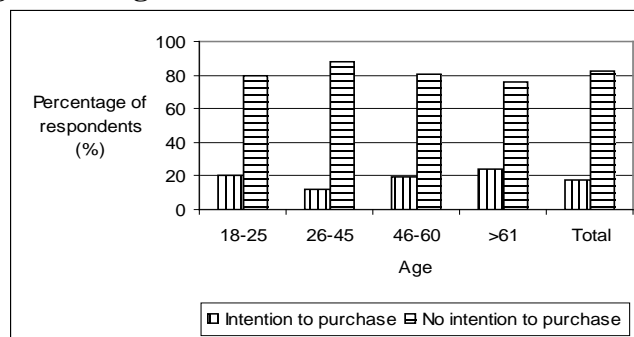
Chart 11. Non-purchasers of gold according to an intention to purchase gold and sex



Source: own study.

As far as the customers' age is concerned, it was found that the oldest respondents (aged over 61) revealed the greatest intention to purchase gold (24.46%). Respondents aged between 18 and 20 as well as those aged between 46 and 60 showed a lower interest (20.00% and 19.43% respectively). Respondents aged between 26 and 46 constituted the lowest percentage of people interested in such purchases (11.76%) – chart 12.

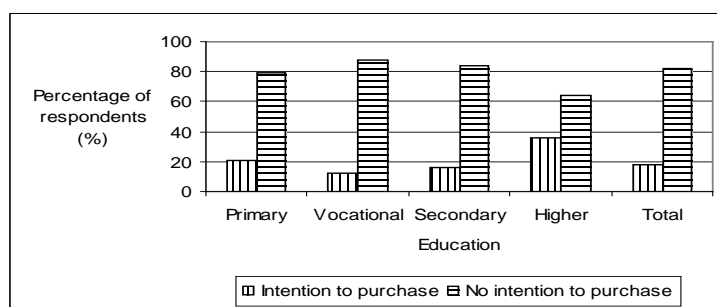
Chart 12 Non-purchasers of gold according to an intention to purchase gold and age



Source: own study.

The respondents' level of education, seem to have had a considerable influence in their decisions to acquire gold in the future. The highest percentage (35.48%) of people declaring their intention to buy gold was among respondents with higher education, the lowest—among those with vocational education (12.56%). The percentage of people with primary education was 20.74%, whereas with secondary education 16.34% – chart 13.

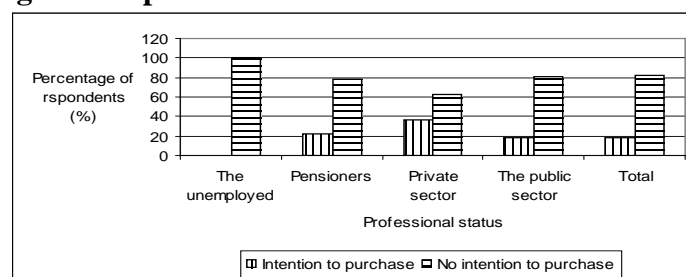
Chart 13. Non-purchasers of gold according to an intention to buy gold and education level



Source: own study.

The results of the analysis seem to indicate that the majority of people who declared to be interested in acquiring gold in the future belonged to the private sector (36.82%). That group of respondents was followed by the group of pensioners (22.18%), and people employed in the public sector (18.48%). It needs to be emphasized here that the unemployed group in 100% declared no intention to purchase gold in the future—chart 14.

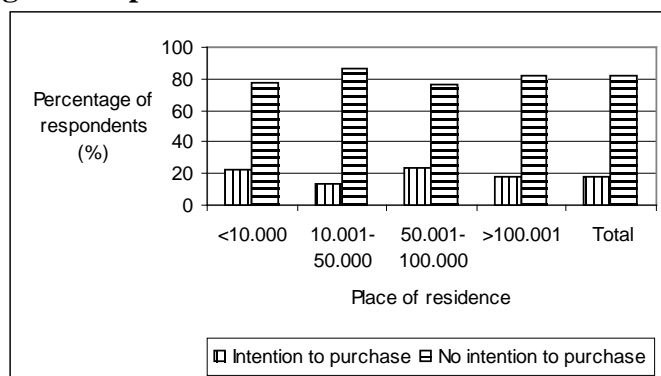
Chart 14. Non-purchasers of gold according to an intention to purchase gold and professional status



Source: own study.

The place of the respondents' residence seems to have had hardly any influence on their intentions to purchase gold in the future. The percentages of the customers who declared their intention to purchase gold in the future were as follows: 13.78% among people living in towns with a population between 10 and 50 thousand, 18.35% among residents of big towns or cities (over 100 thousand inhabitants), 22.29% among people from villages or towns up to 10 thousand, and 23.18% among residents of medium-sized towns, with a population between 50 and 100 thousand – chart 15.

Chart 15. Non purchasers of gold according to an intention to purchase gold and place of residence



Source: own study.

4. Purchase correlations

According to the research aim, it was necessary to establish the correlations between purchases of gold made and an intention to buy gold in the future. It has been assumed that customers present their attitudes towards gold through their intentions to purchase it. They, at the same time evaluate the predicted situation, and express future decisions to buy gold. The aim of the analysis in the statistical perspective was to find out whether or not an intention (declared or not) to purchase gold in the future was determined by gold purchases (made or not made) by customers in the subgroups according to socio-demographic features (table 4).

Table 4. Households according to gold purchases made or intended and socio-demographic features of respondents. Statistical values Pearson's chi square and Fi Yul's coefficients

Socio-demographic features	Chi square	df	Significance p=	Fi*
Total	174,2658	1	0,0000	0,3413
Sex of respondent				
– male	90,8707	1	0,0000	0,3230
– female	76,2959	1	0,0000	0,3494
Age of respondent in years				
– 18–25	37,4103	1	0,0000	0,3636
– 26–45	41,4145	1	0,0000	0,2732
– 46–60	86,5165	1	0,0000	0,5090
– 61 and more	27,4899	1	0,0000	0,2913
Level of education				
– primary	25,7275	1	0,0000	0,3791
– vocational	83,3279	1	0,0000	0,5370
– secondary	26,5764	1	0,0000	0,1933
– higher	12,3343	1	0,0004	0,1973
Professional status				
– unemployed person	0,0000	1	1,0000	0,0000
– pensioner	17,0311	1	0,0000	0,2004
– private sector*	25,4228	1	0,0000	0,2463
– public sector	29,0658	1	0,0000	0,2792
Place of residence				
– <10.000	16,1455	1	0,0000	0,2685
– 10.001–50.000	49,2270	1	0,0000	0,2931
– 50.001–100.000	51,7762	1	0,0000	0,3741
– > 100.001	28,9809	1	0,0000	0,2968
* including-business activity and agriculture				

* In order to determine the correlation strength expressed by the Fi Yul's coefficient, the following grading scale has been adopted: 0–0.3=very weak, 0.3–0.5=weak, 0.5–0.7=strong, 0.7–0.9=very strong and above 0.9=excellent.

Source: own study.

The results of the statistical analysis made it possible to reject-excluding the „unemployed” – the zero hypothesis concerning the independence of variables as the calculated values of chi square statistics are higher than the critical value of chi square, which at the significance level $\alpha=0.0005$ is chi square $\alpha=12.116$. Therefore it may be concluded that there is a correlation between the number of customers who purchased gold in the past and the number of customers who declare their intention to acquire it in the future. Only in the case of the unemployed, the value of chi square was 0.0, which means a lack of correlation between the variables.

Statistical values calculated in relation to the research sample, that is 1496 respondents indicated that the correlation between gold

purchases made and intended was highly significant ($p=0.0000$), however weak ($F_i=0.3413$). In the particular subgroups, according to socio-demographic features, the indexes of the results credibility (excluding "the unemployed" were also highly significant ($p<0.05$). However, the strength of correlation between purchases of gold made and an intention to buy gold in the future was moderately diversified, which the calculated values of F_i Yul's correlation coefficients seem to confirm.

As far as the sex factor is concerned, in the male and female subgroups the purchase correlation strength seemed to be weak and slightly diversified. A slightly higher purchase correlation strength ($F_i=0.3494$) appeared among women than men ($F_i=0.3230$). On the basis of the values it may be concluded that the influence of past gold purchases on the intention to acquire it in the future was bigger in the group of women.

Thanks to the statistical analysis-according to the age of the respondents – it is noticeable that the dominant correlation coefficient ($F_i=0.5090$) appeared in the w subgroup aged 46-60, which seems to indicate that there was a strong correlation between gold purchases made and intended. In the subgroup aged 18–25 the correlation was weak ($F_i=0.3636$), and in the subgroup aged 61 or more it was very weak ($F_i=0.2913$) whereas in the subgroup aged 26–45 it was even weaker ($F_i=0.2732$).

As far as the education level is concerned, the dominant correlation coefficient ($F_i=0.5370$) appeared in the w subgroup of people with vocational education, which seems to indicate that there is a strong correlation between gold purchases made and intended. In the subgroup of respondents with primary education, the correlation was weak ($F_i=0.3791$), and it was very weak in the subgroups of people with secondary education ($F_i=0.3791$) and higher education ($F_i=0.5370$).

With reference to the professional status of respondents, it was found that the correlation strength between purchases made and intended was very weak and, at the same time the weakest among "the pensioners" ($F_i=0.2004$), very weak, however, at a significantly higher levels in the subgroup of "private sector" ($F_i=0.2463$) and "public sector" ($F_i=0.2792$). In the subgroup of "unemployed persons", 100% of the respondents did not make any purchases, nor did they plan to make any in the future.

Thanks to the results obtained it may be concluded that the respondents' residence had a moderate impact on the correlation between gold purchases made and intended. A weak correlation strength

($F_i=0.3741$) appeared in the subgroup of people living in towns with a population of 50–100 thousand. Very weak correlations referred to respondents living in towns with a population of over 100 thousand inhabitants ($F_i=0.2968$), and in towns with a population between 10 and 50 thousand ($F_i=0.2931$). The lowest correlation ($F_i=0.2685$) appeared among respondents from towns with a population up to 10 thousand inhabitants.

Conclusions

In the light of the analysis results obtained, it may be concluded that the demand for gold has revealed a downward tendency. More than 50.00 % of respondents who have purchased gold, and over 18% of those who have not, have declared their intention to acquire gold.

The statistical analysis has revealed a correlation between gold purchases (made or not made) and an intention to acquire it in the future has been found ($\chi^2=174.2658$) in relation to the whole surveyed group. It turned out to be highly significant ($p=0.0000$), however weak ($F_i=0.3414$). It seems to indicate that made or not made purchase of gold only slightly influenced the intention of the market participants to buy it in the future.

The research results seem to have confirmed the hypothesis that the socio-demographic characteristics of respondents have an influence on their behaviors in the process of making decisions about a purchase of gold and an intention to make such a purchase in the future. An increase in the number of potential gold purchasers (purchase intention) in relation to the actual purchasers (purchases made) has occurred only in the oldest age groups, that is “61 years and over”–117.58% and “46–60” years old–104.07%; in the group of respondents with primary education–125.00% as well as those from towns with a population under 10 thousand inhabitants–101.49%. In the group of people from towns with a population of 50–100 thousand, stagnation has occurred (100.00%). In other groups, according to socio-demographic features, a slump has occurred.

The study of the correlation between an intention and an actual purchase of gold has indicated that the strongest correlations have occurred in the age group “46–60” ($F_i=0.5090$) as well as in the group with vocational education ($F_i=0.5370$). The weakest correlation referred to people with secondary education ($F_i=0.1933$), higher education ($F_i=0.1973$), the group of “pensioners” ($F_i=0.2004$) as well as people

employed in the “private sector” ($F_i=0.2463$). The correlation strength in other subgroups was moderately diversified from “very weak” to “weak” ($0.2685 \leq F_i < 0.3791$).