LUXURY PRODUCTS BUYERS' BEHAVIOUR

(PARTIAL INTERNET EDITION)

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The data in the Prince & Associates reports allow for the calculation and analysis of spending on individual categories of luxury products depending on the net worth (net asset value) - analogously to the income elasticity of demand. The analysis on the basis of the income elasticity of demand is not possible as the reports made by this company provide hardly any information about incomes.

As remarked in Chapter 4, the authors of the Prince & Associates reports define assets/worth differently than the authors of the *World Wealth Reports*, as they include in their definition also the value of main residences and these durable consumer goods that the respondents consider as assets.

Apparently, it would be an ideal situation if the asset elasticity of demand (net worth elasticity of demand) could be calculated with longitudinal data and examined to which extent the demand for luxury goods changed in relation to the changes in the value of assets possessed by every respondent. The accessible data allow only for cross-sectional analyses between groups with different net worth at the time determined by the research date.

In the research discussed below (it is the same research done by Prince & Associates, whose results were presented generally in Chapter 4) the questions concerned the already incurred or planned expenses on luxury goods (i.e. in the case of planned spending – behavioural component of attitudes) only among affluent, rich or very rich people.

One may wonder how asset elasticity of demand could contribute to the understanding of demand for luxury goods and the classification of these goods: whether or not it is justified to refer to this idea the line of reasoning pursued for the income elasticity of demand. There are three deviations from the traditional analyses of demand for luxury goods: cross-sectional instead of longitudinal data, planned purchases -in all cases but one- instead of spending incurred and net worth/net assets instead of income level.

Apparently, a high positive correlation may be expected between net asset value and income volume – incomes enable raising assets (especially in the case of newly enriched: a decisive majority of respondents in the Prince & Associates surveys) – however, for the purpose of the analysis it would be perfect if the income state and changes in income levels and assets value could be considered separately. These aspects are not identical. There may be particularly big differences with regard to the level and changes in both these characteristics between the groups of respondents who do have any gainful employment and support themselves on incomes derived from assets (for example inherited or accumulated before), and those who are at the beginning of the enrichment period and do some jobs bringing high incomes (for example show business or sport stars) and have not yet raised any assets from which they could obtain additional incomes. Besides, numerous categories of assets of rich people reduce the level of disposable income: insurance, the use and repair of yachts, private jets, villas etc. absorb considerable amounts of money.

Prince & Associates reports do not say much about the relation between net asset value and incomes.

The survey on a sample of readers of the Elite Traveler magazine conducted by Prince & Associates in three separate surveys in January 2005 (316 respondents), June 2005 (304 respondents) and October 2005 (471 respondents) provides indicators of the income and net worth ratio.

The data for all three samples provide the following characteristics of respondents (with the minimum of $10 million net worth): average household income: $5.3 million; median household income: $1.724 million; average net worth: $196.6 million; median net worth: $46.3 million[1]. The ratio of average income to average net worth is 1 to 37 and the ratio of median income to median net worth is 1 to 27.

According the publication *The new Jet Set, a psychographic analysis of luxury spending*, respondents' average incomes (newly enriched accounted for 97.1% of the sample) were $9.1 million annually and average net worth – $89.3 million. The median of incomes and net worth amounted respectively to $4.1 and $41.2 million[2], which would suggest the income and net worth ratio of 1 to 10. It should be emphasized that the analysed sample included only those people who had some assets and obtained incomes, so it was a special category of rich people.

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[1] *High net worth readership analysis*, Elite Travelers and Prince & Associates, 2005, http://www.elitetraveler.com/business/research.html, [last access: 01.02.2012].

[2] R.A. Prince, H.S. Grove, *The new Jet Set, The new Jet Set, a psychographic analysis of luxury spending*, Elite Travelers and Prince & Associates, 2006, http://www.elitetraveler.com/business/TheNewJetSet-%209.5.06.pdf, p. 4. [last access: 01.02.2012].

Report *Fall 2008 spending survey* provides income data less precisely and introduces an element of diversity in the relations between incomes and net worth: "[…] over 85% households with the net worth of above 30 million dollars had incomes of above 1 million dollars[3]", which would mean that 15% of households did not exceed the truly multimillionaire threshold of 1 million dollars of income. The income of above 1 million dollars was achieved by 70% of households having assets within the range of 10 to 30 million dollars and no household from the group of the least wealthy[4.] Thus, a high positive correlation may be expected between incomes and assets, but there is no "automation" here, and the relation is not functional.

These figures are given so that they could be compared with the data concerning other populations of affluent people in other surveys. However, as a matter of fact, in the case of the analyses below it is not significant, because no report made by Prince & Associates provides these data separately with regard to affluent, rich and very rich buyers.

Thus, an assumption was made then that incomes change proportionally to the net asset value and the ratios income / net worth are the same for affluent, rich and very rich respondents.

This assumption allows for the analogous treatment of asset elasticity of demand coefficients to income elasticity of demand coefficients and for drawing conclusions about the nature of products divided into inferior goods, necessities and luxuries.

The declarations about purchases and planned purchases deal only with the products regarded by the respondents themselves to be luxury products.

The data in Table 5.2 concern the spending incurred, and the data in Tables 5.3–5.9 refer to the spending planned. With regard to the calculation of elasticity coefficients based on the data on the spending planned, not incurred in real terms, the remark made in Chapter 4 may be recalled. Namely, the respondents belong to the population that do not have to tighten their belts before the payday of every salary; and on the basis of their own financial possibilities, their plans with regard to the purchase of luxury goods have a decisively bigger chance to be implemented than it would be the case with regard to the middle class.

The publication *The sky's the limit*[5,] discussed in Chapter 4.2.2 (of the Polish print edition), includes the data on spending on 14 categories of luxury products incurred in 2005 by rich respondents. The sample of 661 respondents consisted

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[3] *Fall 2008 spending survey*, Elite Traveler and Prince & Associates, http://www.elitetraveler.com/business/research.html, pp. 2–3, [last access: 01.02.2012].

[4] Ibidem, pp. 1–2.

[5] R.A. Prince, H.S. Grove, C. Ruderman, D.D. Gollan, *The sky's the limit*, CFPN, Shrewsbury 2007.

of primarily Americans, owners or co-owners of private jets, newly enriched people. In an annex to that book, information is given about the spending of multimillionaires from Hong Kong on 6 categories of luxury products. The sample of 52 respondents consisted only of newly enriched people, men, private planes owners, who made their fortunes themselves.

The data on the net worth in relation to the US respondents are as follows: median – \$41.2 million, average – \$89.3 million[6;] in relation to the Hong Kong respondents: median \$502.8 million, average – \$743.2 million[7.]

Table 5.2 presents the spending on luxury products in thousands of dollars and coefficients of the asset elasticity of demand (e_A) calculated on the basis of average and median net worth of respondents from the US and Hong Kong (the US data refer to 2005, and Hong Kong – 2006).

The elasticity coefficients were calculated according to the basic formula of the income elasticity of demand, replacing the income average with the average (and median) of net worth (a principle was adopted that from the demand value and assets of richer groups, D2, A2 , the assets of less rich people were taken away, D_1, A_1):

$e_A = [(D_2 – D_1)/D_1]/[(A_2 – A_1)/A_1]$, where:

D_1 and D_2 – average demand for luxury products of every compared group of respondents,

A_1 and A_2 – average (or median) of net worth of every compared group of respondents,

e.g. the value of 0.83 for fine art and collectibles was calculated with the use of the average assets in the following way:

e_A fine art and collectibles = $[(12377–1746)/1746]/[(743.2-89.3)/89.3]$.

Naturally, the above and remaining calculations may be made in the reverse order or with the use of different formulas to calculate the elasticity coefficient. However, the coefficient lower than 1 (higher than 1) will remain lower than 1 (higher than 1) irrespective of the formula and the method of calculation applied.

Product categories in Tables 5.2 – 5.9 as well as groups of wealthy and rich individuals follow the original terms used by the authors of Prince & Associates reports.

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[6] Ibidem, p. 21.
[7] Ibidem, p. 187.

Table 5.2. Spending on luxury products in thousands of dollars and coefficients of asset elasticity of demand (e_A) calculated on the basis of average and median net worth for respondents in the US and Hong Kong.

Category	US	Hong Kong	e_A median	e_A average
	Spending in thousands of dollars			
Fine art and collectibles	1 746	12 377.2	0.54	0.83
Jewelry	248	3 924.3	1.32	2.02
Fashion and accessories	117	1 783.6	1.27	1.95
Watches	147	962.6	0.50	0.76
Luxury cars	226	674.1	0.18	0.27
Spa and spa-related services	107	597.9	0.41	0.63

Source: Own calculations based on: R.A. Prince, H.S. Grove, C. Ruderman, D.D. Gollan, *The sky's the limit*, CFPN, Shrewsbury 2007, *N* = 661 (US sample), *N* = 52 (Hong Kong sample), p. 188.

With regard to two categories of luxury products: jewellery and fashion with accessories the coefficients of net worth elasticity of demand for luxury products are higher than 1, and in the remaining cases – lower than 1, irrespective of whether asset median or average values are considered.

Assuming that the ratios of incomes between both groups of respondents were the same as net worth ratios (ratio of average US net worth to Hong Kong average net worth is 1 to 8.3 and ratio of median US net worth to Hong Kong median net worth is 1 to 12.2), **the demand for both above mentioned categories of products would change as specified in the definition of luxury products in economics, and for the remaining categories – as in the case of basic products.** It should be noted that the coefficients of asset elasticity of demand differ so much from unity that these conclusions hold true even if the ratio of incomes between both groups differed "moderately" from the ratios of net worth (for example for the coefficient of 0.76 the decline in difference between both groups of 25% - even if it assumed that the differences in incomes are lower than 25% than differences in net worth – raises its value to 0.98, i.e. it remains lower than 1).

The research discussed from now concerns, as remarked before, only the planned spending on luxury products.

Chronologically, the first research, whose results allow for the calculation of asset elasticity of demand coefficients for groups from the same "environment" (US-"based" respondents) is the *2007 Holiday Spending Survey*[8,] conducted on

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[8] *2007 Holiday spending survey*, Elite Traveler and Prince & Associates, 12–16 November 2007, pp. 5–6, http://www.elitetraveler.com/business/research.html [last access: 01.02.2012].

12–16 November 2007 (after the symptoms of "turbulence" on the financial markets and at the beginning of a durable trend of decline in house prices in the US). It dealt with the planned spending on luxury products in the approaching Christmas and New Year time in comparison with the analogous time a year before.

The respondents in the analysed survey were divided into two groups. The group of affluent respondents included those with net worth in between 1 and 10 million dollars, and rich with the net worth of above 10 million dollars. Because the report does not present the average values for both groups, and for the calculation of elasticity coefficients the level of incomes is not important, but their change (for longitudinal data) or difference between them (for cross-sectional data), it was arbitrarily assumed that in the first variant the second group is three times more affluent than the first group and in the second variant – four times more affluent (if the unknown average of asset value is replaced by the middle of the interval, the ratio to be obtained is 5 million to 15 million and 5 million to 20 million, i.e. a rise in asset value of 200% or 300%).

The data on the planned spending in both groups (already discussed in Chapter 4) and the asset elasticity of demand coefficients are presented in Table 5.3. In each case, the data deal with the people who planned such spending, and not average spending per respondent in the group. Therefore, the differences are in a sense "mitigated" in favour of less affluent groups, and the values of elasticity coefficients smaller as the percentage of people planning their spending is usually lower in richer groups.

By analogy to Table 5.2, value e_A jewellery = 15.5 or 10.03 in Table 5.3 is calculated as follows:
e_{A1} jewellery = [(152400-4900)/4900]/[(15-5)/5] = 15.05;
e_{A2} jewellery = [(152400-4900)/4900]/[(20-5)/5] = 10.03.

With the assumption of the threefold difference in the net worth for all the analysed categories and fourfold for nearly all, except for villa rentals, the values of coefficient of net asset elasticity of potential demand for luxury goods are above 1, which means that the demand grows more than proportionally in relation to the growth in the net worth. Even if a fivefold difference in net worth was assumed, the villas would be joined only by automobiles, whose coefficient would amount to 0.82.

Table 5.3. Planned spending on luxury products and charity in thousands of dollars and asset elasticity of demand coefficients (e_A) with the assumption of three and fourfold difference in the average net worth between the groups of affluent and rich respondents.

Category	Affluent	Rich	e_A difference 3x	e_A difference 4x
	Spending in dollars			
Jewelry	4 900	152 400	15.05	10.03
Fashion and accessories	2 100	46 200	10.50	7.00
Hotels and resorts	2 800	83 400	14.39	9.60
Yacht charters	0	487 900	-	-
Villa rentals	22 000	86 200	1.46	0.97
Watches	1 900	66 700	17.05	11.37
Wine/spirits for entertaining	2 300	31 100	6.26	4.17
Holiday entertaining	4 200	45 800	4.95	3.30
Out of home spa services	3 800	34 900	4.09	2.73
In home spa services	1 900	29 300	7.21	4.81
Events at hotels	9 300	61 700	2.82	1.88
Corporate gifts	600	44 900	36.92	24.61
Electronics	3 300	39 300	5.45	3.64
Charitable donations	4 800	116 300	11.61	7.74
Automobiles/vehicles	43 600	187 400	1.65	1.10
Gifts/services for pets	955	10 200	4.84	3.23

Source: Own calculations based on: *2007 Holiday spending survey*, Elite Traveler and Prince & Associates, 12–16 November 2007, pp. 5–6, *N* = 843, http://www.elitetraveler.com/business/research.html, [last access: 01.02.2012].

However, a conclusion to be drawn is that – analogous to the relation of changes in demand for luxury products to the changes in incomes – there is a similar relation in the case of changes in the net worth: spending on luxury goods are over-proportionally higher than net worth changes. Assuming that the differences in incomes are proportional to asset differences, i.e. the incomes of the richer group are respectively three or four times higher than those achieved by the less affluent group, it may be said that the calculated net asset elasticity of demand coefficients are approximations of income elasticity of demand coefficients. It should be noted though that the value of the aforementioned coefficients is so much higher than 1 in most cases that even considerable deviations from the assumptions about the proportionality of net assets – incomes ratios in both groups do not change the conclusion: in the analysed sample of respondents the demand for luxury products changed as specified by the definition of luxuries in economics for the majority of product categories showing a more than proportional increase compared to the growth in assets and – supposedly – incomes.

Another survey conducted by Prince & Associates in January 2008 after the Christmas and New Year break and distinguished three groups of respondents with regard to net worth: mass affluent from 1 to 10 million dollars, rich from 10 to 30 million dollars and super rich above 30 million dollars.

Because average asset values were not presented, in order to calculate the net asset elasticity of demand coefficient it will be assumed that each of the groups of richer people is, in the first variant, on the average three times more affluent than the poorer group (average asset values are for example as 5 to 15 to 45 million dollars), and in the second variant there are differences as 1 to 4 between the affluent and rich group (average asset values are for example 5 and 20 million dollars). It seems that the assumption of 45 million dollars as an average asset value for the richest group of respondents is likely to underestimate rather than overestimate this average, since in the case of respondents' group in which the lower limit of asset value was 20 million dollars, the average asset value amounted to 89.3 million dollars[9]. The underestimation of assets of the richest group increases the net asset elasticity of demand coefficients, which makes the results more stable at the moment of transferring the differences in assets to differences in incomes and the interpretation of these results with the income elasticity of demand (it will be explained in more detail later on in the chapter).

Tables 5.4, 5.5 and 5.6 present the volume of planned spending on particular luxury product categories and charities as well as values of the asset elasticity of demand coefficients for three groups of respondents analysed in pairs[10].

Table 5.4. Planned spending on luxury products and charity in thousands of dollars and asset elasticity of demand coefficients (e_A) with the assumption of the three and fourfold difference in the average net worth between the groups of affluent and rich respondents.

Category	Affluent	Rich	e_A difference 3x	e_A difference 4x
	Spending in thousands of dollars			
Fashion and accessories	3.6	40.6	5.14	3.43
Watches	2.3	38.4	7.85	5.23
Jewelry	4.6	105.2	10.93	7.29
Electronics	2.9	29.2	4.53	3.02
Charitable donations	2.7	53.3	9.37	6.25
Spa services	1.8	20.2	5.11	3.41

Source: Own calculations based on: *2008 Affluent consumer spending survey, Economic crisis impact on luxury purchasing by the rich*, Elite Traveler and Prince & Associates, 25 January 2008, p. 2, N = 627,   http://www.elitetraveler. com/business/research.html [last access: 01.02.2012]

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[9] R.A. Prince, H.S. Grove, C. Ruderman, D.D. Gollan, *The sky's the limit*, op. cit., p. 21.

[10] *2008 Affluent consumer spending survey, Economic crisis impact on luxury purchasing by the rich*, Elite Traveler and Prince & Associates, 25 January 2008, p. 2.

In all analysed categories the values of the net asset elasticity of demand coefficients were bigger than unity; thus in every case the changes in demand were the same as in the case of luxury goods defined by the income elasticity of demand.

Table 5.5 presents the analysed differences between rich and very rich respondents in planned spending on luxury products and the values of asset elasticity of demand coefficients.

Table 5.5. Planned spending on luxury products and charity in thousands of dollars and asset elasticity of demand coefficients (e_A) with the assumption of the threefold difference in the average net worth between the groups of rich and super rich respondents.

Category	Rich	Super rich	e_A difference 3x
	Spending in thousands of dollars		
Fashion and accessories	40.6	82.8	0.52
Watches	38.4	121.7	1.08
Jewelry	105.2	236.2	0.62
Electronics	29.2	74.9	0.78
Charitable donations	53.3	148.1	0.89
Spa services	20.2	49.8	0.73

Source: Own calculations based on *2008 Affluent consumer spending survey, Economic crisis impact on luxury purchasing by the rich*, op. cit., p. 2, *N* = 627.

Only in the case of jewellery the value of the asset elasticity of demand coefficient for luxury goods is higher than unity (though not much), thus the demand for the remaining spending categories rose less than proportionally in relation to the rise in asset value. If this situation is to be referred to the income elasticity of demand coefficient, besides jewellery, the demand for no other category of goods (including charity spending) rose to this extent as in the case of luxury goods, but as in the case of normal basic goods.

Table 5.6 presents differences in the planned spending and asset elasticity of demand between extreme groups: affluent and very rich with the assumption of the ninefold difference in the average value of net assets (for example 5 to 45 million dollars).

Table 5.6. Planned spending on luxury products and charity in thousands of dollars and asset elasticity of demand coefficients (e_A) with the assumption of the ninefold difference in the average net worth between the groups of affluent and super rich respondents.

Category	Affluent	Super rich	e_A difference 9x
	Spending in thousands of dollars		
Fashion and accessories	3.6	82.8	2.44
Watches	2.3	121.7	5.77
Jewelry	4.6	236.2	5.59
Electronics	2.9	74.9	2.76
Charitable donations	2.7	148.1	5.98
Spa services	1.8	49.8	2.96

Source: Own calculation based on: *2008 Affluent consumer spending survey, Economic crisis impact on luxury purchasing by the rich*, op. cit., p. 2, N = 627.

In comparison with the group of "merely" affluent people spending on categories of luxury goods in the group of very rich was higher over-proportionally in relation to the assumed net assets.

Thus, while the difference in affluence between the group of "affluent" and either of the two „rich" groups was accompanied by over-proportional rise in planned spending on luxury goods, the difference in affluence between the group of "rich" and "super rich" was not accompanied by this phenomenon.

The next survey was conducted by Prince & Associates in September 2008, soon after the bankruptcy of Lehman Brothers Holdings Inc. and like before distinguished three groups of respondents with regard to net worth: affluent (from 1 to 10 million dollars), rich (from 10 to 30 million dollars) and super rich (above 30 million dollars).

Tables 5.7, 5.8 and 5.9 present planned spending on particular categories of luxury products and values of asset elasticity of demand coefficients for three groups of respondents, as in previous analyses in pairs (data as in Table 4.13 of the Polish print edition of 2012)[11].

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[11] *Fall 2008 spending survey*, Elite Traveler and Prince & Associates, pp. 1–3.

Table 5.7. Planned spending on luxury products in dollars and asset elasticity of demand coefficients (e_A) with the assumption of the three and fourfold difference in the average net worth between the groups of affluent and rich respondents.

Category	Affluent	Rich	e_A difference 3x	e_A difference 4x
	Spending in dollars			
Audio/Visuals	1 900	16 700	3.89	2.60
Apparel/Accessories	1 200	37 100	14.96	9.97
Luxury resorts and hotels	1 800	35 100	9.25	6.17
Wine & spirits - personal consumption	400	6 200	7.25	4.83
Jewelry and watches	2 400	51 600	10.25	6.83
At home spa services	1 300	7 400	2.35	1.56
Experiential excursions	12 200	23 400	0.46	0.31
Luxury cruises	3 400	24 100	3.04	2.03
Vacation home rentals	11 800	43 200	1.33	0.89
Wine & spirits – social entertaining	900	18 900	10.00	6.67
Out of home spa services	2 100	9 700	1.81	1.21
Yacht rentals	0	0	0.00	0.00
Redecorating/home furnishing/ kitchen	9 400	44 200	1.85	1.23

Source: Own calculations based on *Fall 2008 spending survey*, Elite Traveler and Prince & Associates, pp. 1–3, $N = 439$, http://www.elitetraveler.com/business/research.html, [last access: 01.02.2012].

Except for spending on excursions and vacation home rentals, which appeared marginal for affluent respondents (as shown in Table 4.12 in Chapter 4 of the Polish print edition, the percentage of affluent people who wanted to spend money on these purposes amounted to 0.8% and 1.2%, and rich people 5.9% and 22.5% respectively); in all remaining categories the asset elasticity coefficients, irrespective of the assumed differences between the average net asset values, were higher than 1, i.e. demand rose more than proportionally in relation to the asset value difference.

Table 5.8 presents the analysed differences between rich and very rich respondents.

Table 5.8. Planned spending on luxury products in dollars and asset elasticity of demand coefficients (e_A) with the assumption of the threefold difference in the average net worth between the groups of rich and super rich respondents.

Category	Rich	Super rich	e_A difference 3x
	Spending in dollars		
Audio/Visuals	16 700	42 500	0.77
Apparel/Accessories	37 100	77 300	0.54
Luxury resorts and hotels	35 100	54 900	0.28
Wine & spirits - personal consumption	6 200	23 400	1.39
Jewelry and watches	51 600	108 100	0.55
At home spa services	7 400	11 900	0.30
Experiential excursions	23 400	49 200	0.55
Luxury cruises	24 100	56 900	0.68
Vacation home rentals	43 200	59 100	0.18
Wine & spirits – social entertaining	18 900	27 400	0.22
Out of home spa services	9 700	21 400	0.60
Yacht rentals	0	380 400	
Redecorating/home furnishing/kitchen	44 200	102 300	0.66

Source: Own calculations based on *Fall 2008 spending survey*, op. cit., pp. 1–3, *N* = 439.

Except for wine and spirits for personal consumption, in the case of which the difference in demand value was higher than the difference in asset values, in no analysed category did the elasticity of demand coefficient come up to unity. The groups of the richest respondents is distinguished due to spending on yacht rentals, which were of marginal significance: only 1% of respondents planned them. It confirms a remark made by R.A. Prince, cited in Chapter 4, that basic differences in behaviours and attitudes to luxury products take place between respondents with assets above and below the limit of 10 million dollars (it should be borne in mind though that respondents in the sample are usually newly enriched and to a large extent US-based according to the Prince & Associates reports).

Table 5.9 presents differences in spending and net asset elasticity of demand coefficients between extreme groups: affluent and very rich with the assumption of the ninefold difference in the average net asset value (e.g. as 5 to 45 million dollars).

Table 5.9. Planned spending on luxury products in dollars and asset elasticity of demand coefficients (e_A) with the assumption of the ninefold difference in the average net worth between the groups of affluent and super rich respondents

Category	Affluent	Super rich	e_A difference 9x
	Spending in dollars		
Audio/Visuals	1 900	42 500	2.37
Apparel/Accessories	1 200	77 300	7.05
Luxury resorts and hotels	1 800	54 900	3.28
Wine & spirits - personal consumption	400	23 400	6.39
Jewelry and watches	2 400	108 100	4.89
At home spa services	1 300	11 900	0.91
Experiential excursions	12 200	49 200	0.34
Luxury cruises	3 400	56 900	1.75
Vacation home rentals	11 800	59 100	0.45
Wine & spirits – social entertaining	900	27 400	3.27
Out of home spa services	2 100	21 400	1.02
Yacht rentals	0	380 400	
Redecorating/home furnishing/kitchen	9 400	102 300	1.10

Source: Own calculation based on *Fall 2008 spending survey*, op. cit., pp. 1–3, *N* = 439.

Despite considerable differences in the values of planed spending between affluent and rich in every analysed category, the net asset elasticity of demand coefficients do not exceed unity in a few cases. With regard to excursions and vacation home rentals, the same remarks can be made as those when comparing affluent and rich respondents: among affluent people there is a small percentage of people planning spending on these categories. Perhaps, they are the people whose assets are close to the limit of 10 million dollars and in this connection the differences in affluence between them and people from the richer groups are smaller than assumed. In the case of in home spa services, there may be a result of the upper price limit effect or they may be substitutional for out of home spa services. In the remaining categories the elasticity coefficients indicate higher values than 1, which suggests the retention of the luxury status of the examined goods.

Thus, assuming that, first, there is a high positive correlation between net asset value and income level (and that incomes/assets ratios approximately equal in the groups of respondents: affluent, rich and very rich), and second the analysed categories remain luxury goods, as this was the way the question was formulated

in the questionnaire (the respondents determined spending on products they themselves considered luxury), the appropriateness of defining these goods only by means of income elasticity of demand coefficient raises doubts again.

In numerous categories of tangible goods and services in Tables 5.5 and 5.8 (in particular Table 5.8), presenting differences between rich and very rich respondents, the values of net asset planned demand coefficients are so considerably lower than unity that even if there were significant deviations in relation to the assumed similarities of incomes/assets ratio, in the case of products whose coefficient value is below 0.5 it may be supposed that the differences in the value of demand are still less than proportional both with regard to the asset value and income level, which contradicts the definition of luxury goods in economics.

For example, if the asset elasticity of demand coefficient amounts to 0.55 (as for jewellery and watches as well as excursions in Table 5.8 and about the same for fashion and accessories in Tables 5.5 and 5.8), it reaches the value of 1 with the difference in the average asset value between the group of rich and very rich as 21.5 to 45, i.e. nearly 2 to 1 (instead 15 to 45, i.e. 3 to 1, as assumed in the calculation). For the coefficients of 0.3 and below, the difference in the average asset value would have to exceed the ratio 28 to 45, i.e. 1 to 1.61 (which with the definition of the rich group assets within the range 10-30 million dollars, makes the average of 28 million practically impossible).

As remarked before, the assumption was made that the average net asset value of the richest group of respondents should amount to 45 million dollars. If the value assumed was for example 60 million dollars or 89.3 million dollars, as specified in relation to the sample of respondents in the 2005 survey (Table 5.2), then even a very significant deviation from proportionality of incomes/assets relations between the groups of rich and very rich in favour of the rich, still leaves the value of asset elasticity of demand coefficients (and, by analogy, the coefficients of income elasticity of demand) at the level of basic goods, i.e. below 1.

It should be emphasized though that, in the aforementioned analyses, there were three already remarked deviations (due to the lack of necessary data) from the assumptions on which the definition of luxury goods in economics is based: the data on net assets instead data on incomes, the data on differences (cross-sectional) instead of changes (longitudinal) and the data on planned spending instead of incurred spending (except for data in Table 5.2). They make the conclusions above about the lack of appropriateness of defining luxury goods exclusively through the income elasticity of demand open to a greater extent to further research than an analogous conclusion based on the Bain & Company as well as Euromonitor data on the changes in actual sales of luxury goods in 2009.

A more general area for reflection is provided by the results of testing hypotheses H1a and H1b analysed in Chapter 4 on the impact of income decline on the

demand for luxury goods. Although the data on the intended spending on luxury goods were more in favour of the ratchet effect than the reaction related to the qualities of luxury goods based on the income elasticity of demand, the aspiration to increase the purchase of luxury goods when incomes are on the decline remains all the time unexplained. A notable percentage of respondents in the richest groups, even in the period of a considerable GDP decline in the US and collapse on the Stock Exchange in the 3rd and 4th quarters of 2008, wished to go on increasing their spending on luxury goods – nearly 1/6 of the rich and 1/4 of very rich. Were they, due to this, considered by the members of this group of in the light of division of goods according to the income elasticity of demand to be inferior goods?

It is not very probable that the rich respondents wishing to increase spending on luxury goods could have higher incomes in 2008 in comparison with 2007. The data presented in Chapter 4.2.3 concerning:

– the decline in incomes of 1% of the richest US based people of 7.8% (and the higher the decline, the higher the income group, for example the income of 0.01% of the richest fell by 13.9%)[12],

– the decline in the number of Americans with annual incomes of above 1 million dollars in the same period and the data presented in Chapter 5.1 about double digit declines (in the US and Canada) in both the number of „High-Net Worth Individuals" and the value of assets in their possession[13], indicate a universal and strong negative impact of the crisis on the financial situation of the richest.

Another explanation would require the search for reasons behind the declared maintenance of or increase in spending on luxury products in "restructuring" of this spending. The rich respondents may have resigned or intended to resign from certain very costly spending, e.g. purchases of works of art not accounted for in most Prince & Associates reports (reports on the art market indicate several dozen percent losses in turnover in 2009 in comparison with 2008, in particular on the contemporary art market, where sales dropped in some categories even by 80%[14]), from – statistically unrevealed – spending on wages for the staff allowing for the use of the possessed luxury products (yacht crew, pilots, gardeners, cooks, maids etc.) and they wished to spend some part of the funds "released" in this way on luxury products which did not require this sort of service; maintaining or increasing their purchases.

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[12] J.A. Parker, A. Vissing-Jorgensen, *The Increase in Income Cyclicality of High-Income Households and its Relation to the Rise in Top Income Shares*, September 2010, http://www.kellogg.northwestern.edu/faculty/vissing/htm/ParkerVissing%20BPEA%20Conference%20Version.pdf, p. 32 [accessble: 01.02.2012].

[13] *World Wealth Report 2009*, op. cit., 2009, p. 8.

[14] K. Crow, *Doubling down on the art market*, The Wall Street Journal Europe, 18–20.09.2009, p. W10.

In this connection, perhaps, the total value of spending on luxury products even in this group declined, but these multidirectional changes (a rise in spending on some categories of luxury products and a decline on others) indicate that the division of goods into inferior goods and normal goods (necessary and luxury) with regard to the value of income elasticity of demand coefficient makes no sense for very rich people. It results from the phenomenon discussed before of lower than proportional growth in the planned demand for luxury goods at the highest level of wealth and from the fact (discussed in Chapter 5.2) of achieving a higher turnover (in the period of income decline in 2009) by some luxury brands and the leather goods. These brands and categories of goods should be classified as inferior goods, while in practice they are the most desired luxury.

Paradoxically, this necessity, especially in the period of crisis, reflects the strength of luxury products and brands.

The category analysed only in one Prince & Associates research (besides one number provided in relation to Hong Kong multimillionaires) was the works of art. It appeared that spending on them was not common enough (more than 30% of very rich respondents declared purchasing them), and the amounts declared exceeded those aimed at several subsequent categories of luxury goods together. Perhaps, (not accounting for investment and saving), in view of the confirmed "suppressed" demand for luxury goods together with moving from being rich to very rich, it is the works of art that absorb the financial surpluses of the richest and the demand for this category of goods responds more than proportionally to the changes in income, just as it occurs in relation to the remaining luxury goods in the groups of "merely" rich, affluent and less than affluent.

In their budgets, the respondents planned to spend considerable amounts for charity, about which data, for no obvious reasons were regularly mentioned in the reports. The nature of the motivation concerning charity should be examined in detail to find out how far it results from the wholeheartedly desire to help, and to what extent it is aimed to maintain or strengthen their own social position (if donations were made publicly, for example at charity balls, they might be regarded as a conspicuous waste), and how far they may become an element of tax optimization.

The significance of the above analyses for the theory of behaviour of luxury products buyers consists in the use of, a rarely applied in the economy and unused so far (i. e. at least up till 2012) – as it seems – in research on behaviour of buyers (within this sub-discipline), the concept of net asset elasticity of demand and indication of less than proportional growth in demand at very high levels of wealth in the case of numerous categories of luxury products.

It would be interesting from the research perspective to distinguish more thresholds of wealth after exceeding of which buyers' behaviours would change in leaps, and next stabilise.