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Measuring intangible assets in the Spanish economy. Marketing assets

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Abstract

The measurement of intangible assets constitutes a field of traditional and current relevance for economic theory and accounting and statistical practice. Growth and productivity analysis models based on production factors (labour and capital) require the incorporation of all existing forms of capital, both tangible and intangible, which underscores the interest in such estimations.

Intangible assets are well identified in economic literature. An essential subset of intangible assets resides within marketing products, encompassing brand names, trademarks, logos, and digital domains. In a globally interconnected economy, companies invest substantially in promoting and differentiating their products, driving consumer perception and augmenting sales margins.

The current landscape of business accounting highlights the discrepancy between the growing importance of intangible assets and their inadequate representation in balance sheets. Their inclusion is contingent upon identifiable valuation, control, and potential future benefits, creating complexities in their integration within national accounting systems.

Thus, the challenge lies now in quantifying and integrating the economic value derived from these investments into national accounting frameworks. The impending 2025 revision of the System of National Accounts (SNA) signals a crucial juncture in this trajectory. The proposed guidelines lean towards classifying certain intangible assets, previously labeled as non-produced assets, as produced assets. This transformative shift in classification promises substantial ramifications for the delineation of assets within the economic system, altering the contours of macroeconomic aggregates on a national scale.

INE-Spain has taken proactive strides in addressing these challenges. Their ongoing research delves into exploring diverse sources and estimation methodologies to quantify the flows and stocks associated with these intangible assets. Through this initiative, they aim to develop implementation protocols that can effectively incorporate marketing assets into the Spanish national accounts. This paper presents the project's status, investigated sources and methods, initial preliminary results, and future lines of action.

Keywords

Intangibles, Marketing, Globalization, Growth, Productivity, SNA 2025

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INE-Spain

1. Background. Theoretical and conceptual framework

Marketing assets are a relevant part of the globalized economy. Companies invest large amounts of money to communicate to their potential customers ideas or concepts associated with their products that make them more attractive to differentiate themselves from the competition and increase their profits, either through an increase in unit margins, an increase of sales volume or a combination of both. Large multinational groups compete in international markets by making significant investments in marketing assets to advertise their products, differentiate them from other competitors, incorporate intangible value for the consumer and increase sales margins.

To do this, companies plan medium and long-term marketing strategies, which involve significant investments. The marketing products that result from these collect the commercial value of a company or a name.

Companies also try to protect their commercial position by registering their trade names and logos to ensure that no one can use them and therefore exclusivity in obtaining the benefits derived from investments in marketing assets.

It is relevant to note that the time horizon of use of these marketing products clearly exceeds one year. Brands, logos, and web domains are used and provide marketing services to companies for long periods of time, although it is true that they require permanent reinforcement so that potential customers maintain their memory effectively.

Therefore, marketing products meet the normally accepted criteria to qualify them as assets themselves: in national accounts terms, it is true that (i) a productive unit must make the decision to undertake the expenditure to produce the asset; (ii) there is a clear owner of the asset with exclusive rights of use; (iii) the asset provides capital services in the production chain of goods or services (2008 SNA 10.8 and 10.9.a).

However, marketing assets present some difficulties in their effective accounting as produced assets. These difficulties take shape in three aspects: the valuation of the asset, the consumption of the asset in the production process (and therefore the duration of the asset) and the volume of the stock (price index). To overcome such difficulties is necessary a common guidance for countries to evaluate marketing assets.

2. Marketing assets in the national accounts system

No common guidance exists for measuring marketing assets. Perhaps for this reason, until now it has been decided not to count marketing assets as *produced assets* in the system of national accounts. For it to be possible to account for marketing assets, it is necessary to establish a reasonable system shared by countries, sustainable over time and commonly used by all economies with the aim of maintaining the comparability of data between countries and over time.

Both the *System of National Accounts* (SNA 2008[1]) - and, therefore, the *European System of National and Regional Accounts 2010* (ESA 2010)[2]- and the current *Balance of Payments and International Investment Position Manual* (BPM6[3]) coincide in classifying marketing assets as non-financial non-produced assets. For this reason,

[1] https://unstats.un.org/unsd/nationalaccount/docs/sna2008spanish.pdf

[2] https://www.boe.es/doue/2013/174/L00001-00727.pdf

[3] https://www.imf.org/-/media/Websites/IMF/imported-publications-loe-pdfs/external/spanish/pubs/ft/bop/2007/bopman6s.ashx

currently, investments in marketing assets made by companies are not counted in the capital account as *gross fixed capital formation* in the national accounts, but as *intermediate consumption.*

Marketing assets are intangible assets. The 2008 SNA, unlike the 1993 SNA, also chooses not to define the category of intangible assets (SNA 10.67, A3.50 and A3.52.d)[4].

Firstly, in the current standard, an asset is defined as "*a store of value that generates a benefit or a series of benefits accruing to its economic owner from its possession or use during a period. It is a means that allows value to be transferred from one accounting period to another"* (SNA 10.8).

Subsequently, assets are classified as *financial* and *non-financial*. Within non-financial assets, *produced assets are* those that have their origin as products of production processes included within the production boundary; and *non-produced are* those that have their origin in ways other than production (SNA 10.9).

In turn, *non-financial assets produced* are subdivided into (i) *fixed assets,* which are used repeatedly or continuously in production processes for more than one year, (ii) *stocks* of production intended for sale and (iii) *valuable objects* that are characterized more as a store of value than as productive capital (jewellery, works of art, precious stones and metals, etc.) (SNA 10.10).

The category of fixed assets includes all tangible assets (buildings, infrastructure, machinery, etc.), as well as the following intangible assets, referred to in the manual as *intellectual property products* (SNA 10.98).

- Software and databases.
- R&D.
- Mining exploration and evaluation.
- Original for recreation, literary or artistic.

The SNA 2008 does not recognize any other intangible assets as fixed assets.

On the other hand, *non-produced non-financial assets* are classified into three categories (SNA 10.14):

- Natural resources.
- Contracts, leases and licenses.
- Goodwill and marketing assets.

In particular, marketing assets "consist of items such as brand names, mastheads, trademarks, logos, and domain names. A brand can be interpreted as far more than just a corporate name or logo. It is the overall impression a customer or potential customer gains from their experience with the company and its products." SNA (10.198)

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[4] 10.67 *The SNA does not formally include a division between tangible and intangible assets in the classification.*
A3.50 *In relation to the classification of assets, the 2008 SNA, like its predecessor, differentiates non-financial assets and financial assets/liabilities at the first level of classification. In non-financial assets, it distinguishes between produced and non-produced assets. In the classification of produced and non-produced assets, there is no longer a distinction between tangible and intangible assets. In the 2008 SNA, non-produced assets are subdivided into three categories: natural resources; contracts, leases and licenses; and purchase and sale of goodwill and commercial assets.*
A3.52.d *The expression "intangible fixed assets" is modified by "intellectual property products". The word "products" is included to specify that it does not include third-party rights that are non-produced assets in the SNA.*

These assets are only recorded when a sale or purchase of a company or one of those assets takes place (SNA 10.17)[5]. That is, *marketing assets* are recorded in the system of accounts either when a company is purchased and sold, together with the goodwill, and for a value equal to the difference between the price paid and the value of the assets, less the company's liabilities, or when a sale of one of these marketing products occurs, valued at the purchase and sale price of the asset. Although their accounting can be relatively complex, the registration of this type of operations does not affect, with the current standard, any aggregate of the *current accounts.* It is recorded directly in the *accumulation accounts* as *non-produced assets.* (SNA 12.33).

That is, in the case of the sale and purchase of a company, the joint value of the goodwill and the marketing assets are calculated as a residual that, in addition, fulfils the function of absorbing the difference between the paid value and the net value of the company. If the marketing asset is the subject of an isolated sale, identical accounting treatment is provided (SNA 12.35).

The moment of registration of these flows is the moment of sale (SNA 12.34).

The 2008 SNA does not recognize the existence of any other type of intangible assets such as product design assets, specific training, or business organization.

However, it is not difficult to theoretically justify that *marketing assets* (or even the rest of the intangible assets) are *fixed produced assets* in the national accounts framework.

- They meet all the required characteristics to be a produced non-financial asset (SNA 10.8 and 10.9): it is a store of value, it generates benefits for its owner, and it is a product of a production process.
- Additionally, the asset is used repeatedly in the production process.

In short, there seems to be no theoretical reason not to consider marketing assets as fixed assets. In fact, the 2008 SNA itself explicitly recognizes that the difficulty of economically valuing marketing assets is the main reason for not having considered them, until now, as produced assets (2008 SNA, A4.53).

That is the vision that has motivated the discussion on the statistical recording of marketing assets in the review agenda of the SNA and the BPM, within which framework, the *Globalization Group* of the *Intersecretariat Working Group of National Accounts* (ISWGNA)[6] has prepared the document G.9 *Payments for Unproduced Knowledge-Based Capital (Marketing Assets)*[7], which analyses the registration of marketing assets in national accounts systems and balance of payments statistics. This document concludes by recommending the registration of marketing assets as non-financial produced assets and analysing the practical viability of said accounting principle.

It is true, however, that the lack of a clear, consensual, and shared guide for the valuation of the marketing assets produced can cause different countries to use different criteria for valuation, which would blur the comparisons between economies. It could even happen that the same country modified its valuation method, which would make it difficult to analyse the evolution of this type of assets. To avoid this risk, it has been decided, until now, not to value the production of marketing assets. In this way, although the

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[5] 10.17 *Goodwill and marketing assets represent all or part of the net value of an institutional unit. It is only recorded when a unit is acquired in its entirety or when an identifiable marketing asset is sold to another unit.*

[6] The ISWGNA is a working group on National Accounts created by the United Nations Statistical Commission (UNSC) in which the European Commission, the International Monetary Fund, the OECD, the United Nations and the World Bank participate. https://unstats.un.org/unsd/nationalaccount/iswgna.asp

[7] https://unstats.un.org/unsd/nationalaccount/aeg/2022/M18/M18_10_G9.pdf

investment figures in intangibles are biased, the bias that occurs is systematic and is not subject to subjective valuation criteria.

Therefore, the development of a consensual, robust, and practical methodology is one of the necessary conditions to begin to consider marketing assets as produced assets. This is what this paper begin to address for the Spanish economy.

3. Sources and methods

There are different types of economic operations associated with the production and use of marketing assets. To reflect all these flows in the system of accounts, it is necessary to define the corresponding criteria for classifying these assets and valuing these operations. In particular, if we effectively consider these types of products as produced assets:

1) The creation of a marketing asset, that is, expenses incurred by a company to create a marketing asset on its own will be recorded as *own-account production*, P.12, of the company. From the use perspective, it will be recorded also within the company's *gross fixed capital formation* (P.51).

2) The purchase and sale of marketing assets, that is, the transfer of all rights and obligations of the asset from one unit to another in exchange for a price will be recorded as *gross fixed capital formation* (P.51) too (acquisitions/disposals of fixed assets).

This paper focuses on testing a method for providing estimates on the total output (and investment) of marketing assets, considering both the own-account production and the acquisition of marketing assets in the market. The work of Carol A. Corrado, Charles R. Hulten and Daniel E. Sichel (CHS 2005) has become a central reference and a conceptual framework for measuring intangibles, in general, that has been assumed by most subsequent studies.

This reference proposes the most widely used method for estimating investment in intangibles and, in particular, marketing assets. It is based on a valuation by sum of cost for the *own account production/gross fixed capital formation* (1) and the application of a capitalization factor (CF) to the total purchases of marketing products by market producers to obtain the value to be capitalized (2).

In this method, double-counting as investment of marketing production sold in the market should be avoided. To achieve this, not all the purchases of such products by producers primarily dedicated to production of this kind of products should be considered as investment (CF should be reduced in that branch of activity).

Own-account production

Generally, in specialized literature, all estimates of marketing expenditure by own account are obtained by summing costs, which is consistent with the method commonly used in national accounts to estimate other flows that are not exchanged in the market, like expenditure on own-account development of R&D or software. This is also the approach followed in this work.

From this perspective, the value of own-account production would be equal to the labour costs (*compensation of employees*) of personnel engaged in marketing production (CE), plus the current expenditure on inputs (*intermediate consumption*) used in such production (IC), plus the depreciation of the produced asset (*consumption of fixed capital*) (CFC) and plus other taxes less subsidies on production[8].

Estimates on the first component (CE) are carried out by identifying, within each branch of activity, the number of workers involved in those activities, the wage cost of these occupations (in terms of compensation of employees, i.e., including wages, in cash and in kind, and employer social contributions) and the percentage of time they dedicate to these activities. At national level, two statistical sources, compiled by INE-Spain, are highly relevant for the development of such estimates:

- The *Structure of Earnings Survey* (*Encuesta de Estructura Salarial,* SES), which provides information on the wage cost of occupations at detailed level of the *National Classification of Occupations* (CNO 2011)[9].
- The *Labour Force Survey* (*Encuesta de Población Activa,* LFS), which provides information on the number of jobs per occupation and branch of activity, also at detailed level of the CNO 2011 and of the *National Classification of Activities* (CNAE 2009)[10].

In a base scenario calculation, various three-digit CNO occupations are considered to account professionals involved in the production processes of marketing products/services:

- *Sales, Marketing and Development Managers* CNO 122[11].
- *Sales, Marketing and Public Relations Professionals* (CNO 265 and CNO 264)[12].
- Other occupations, which include: *Visual artists* (CNO 293[13]), *Draughtspersons* (CNO 311[14]), *Telecommunications and broadcasting technicians* (CNO 383[15]) and *Printing trades workers* (CNO 762[16]).

The percentage of their workday that these professionals dedicate to internal marketing development within the company are based on different business organization studies and consistent with the assumptions made in the methodological references[17]: in the base scenario, 15% in the case of CNO 122 ,50% in the case of CNO 265 and 264, and 5% in the case of the other occupations considered.

Thus, the procedure for estimating personnel expenditure would consist of:

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[8] One could argue for the inclusion of a profit margin. However, we have omitted the profit margin to maintain consistency with the methodologies referenced in the bibliography, as EUKLEMS & INTANProd. Anyway, should we opt for a 10% profit margin, we can allocate additional time to the production of marketing assets to 16.5% (=15%+1.5%) and to 55% (=50% + 5%) for directors and technicians respectively.

[9] National adaptation of the International *Standard Classification of Occupations* (ISCO-08).

[10] This is consistent with *European Classification of Economic Activities* (NACE Rev.2), that in turn follow the recommendations adopted by the United Nations Statistical Commission embodied in the current *International Standard Industrial Classification* (ISIC Rev.4).

[11] ISCO 122.

[12] ISCO 243.

[13] ISCO 2651.

[14] ISCO 3118.

[15] ISCO 352.

[16] ISCO 732.

[17] EUKLEMS & INTANProd.

- Multiplying the average wage costs in each branch of activity, as gathered by the SES survey, by the number of employees (categorized by their employment status: self-employed workers, employees, and a combination of both) in those occupation, as gathered by the LFS survey, and by the percentage of time dedicated to the aforementioned activities. The salary of self-employed workers has been equated with that of employed workers.
- Calibrating the result to the concept of *compensation of employees* in terms of national accounts by applying, in each branch of activity, a correction factor defined as the ratio between the *compensation of employees* for marketing and the total wage cost in each industry according to the available National Accounts data.

Additionally, the remaining cost components (intermediate consumption, depreciation and taxes) will be estimated assuming a proportional distribution of cost related to marketing activities similar to that of labour expenditure in each industry, based on the available national accounts figures for the reference year (2021).

Marketing purchases

The expenditure on marketing asset acquisitions can be identified in the available Supply and Use Tables of the National Accounts. Under SNA 2008, it corresponds to the *intermediate consumption* of *advertising services and market research* (CPA[18] 73) in each branch of activity. The method for estimating such expenses would remain the same as that already employed in the current series of the national accounts.

These purchases will be multiplied by the CF in each industry. In the base scenario, the CF is set at 0,6, except in the case of the *advertising services and market research* industry, where a reduced CF is considered (0,3). This adjustment prevents double counting as investment of purchased marketing products that are subsequently resold in the market. *"Capitalization factors do not vary across industries, except for the industry producing the corresponding asset, where capitalization factors are reduced to reflect estimates of the industry own use, i.e., subcontracting activity within the industry"* (Bontadini 2023).

4. Experimental data

Base scenario

The table below displays calculations that underpin the base scenario of marketing asset production and investment in the Spanish economy for the reference year 2021:

[18] Classification of Products by Activity.

Production/gross fixed capital formation on marketing assets

Year 2021	NACE sections												
	A	BDE	C	F	GHI	J	K	L	MN - ex MK	MN - MK	OPQ	RSTU	Total
Occupations (ISCO)													
122 Sales, marketing and development managers													
Average wage (euros)	-	168.152	61.200	46.471	151.125	52.254	65.013	48.855	114.237	66.841	186.523	77.127	
Nº of workers	100	1.150	27.300	2.375	27.075	10.075	6.050	800	6.671	13.004	2.250	4.300	101.150
% time share spent in marketing production by occupation	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	
Total= wage by worker by time (million euros)	-	10	251	17	209	79	59	6	55	130	21	25	862
243 Sales, marketing and public relations professionals													
Average wage (euros)	-	126.355	53.421	29.140	40.426	-	-	29.391	54.587	22.139	57.925	-	
Nº of workers	-	14.625	14.150	5.500	5.025	-	-	2.250	984	2.216	550	-	45.300
% time share spent by occupation	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	
Total= wage by worker by time (million euros)	-	372	378	80	102	-	-	33	14	25	7	-	1.009
XXX Other occupations													
Average wage (euros)	-	56.521	23.835	26.198	71.144	35.827	-	40.552	39.880	22.713	62.132	63.859	
Nº of workers	300	750	49.550	4.750	37.675	17.275	150	1.675	8.923	17.352	20.725	30.275	189.400
% time share spent by occupation	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	
Total= wage by worker by time (million euros)	-	1	59	6	40	31	-	3	9	20	23	46	238
Marketing assets wage cost (million euros)	-	383	688	103	351	110	59	42	78	175	51	71	2.110
Compensation of employees (million euros)	7.365	11.191	73.865	38.857	130.999	28.225	19.854	5.196	68.314	3.580	180.394	31.523	599.363
Wages (million euros)	6.510	8.550	55.768	29.351	100.578	22.068	14.902	4.081	52.871	2.814	139.844	24.701	462.038
Ratio National CE/National wages	*113%*	*131%*	*132%*	*132%*	*130%*	*128%*	*133%*	*127%*	*129%*	*127%*	*129%*	*128%*	
Compensation of employees (million euros)	0	507	911	136	455	141	79	54	101	222	65	92	2.762
Marketing purchases (million euros)	40	242	2.661	280	4.378	974	2.169	150	956	2.729	649	1.053	16.280
Capitalization factor	60%	60%	60%	60%	60%	60%	60%	60%	60%	30%	60%	60%	
Capitalized marketing expenditure	24	145	1.597	168	2.627	585	1.301	90	573	819	389	632	8.949
National intermediate consumption (million euros)	31.695	65.071	427.383	98.505	228.387	52.578	35.664	22.918	72.469	7.854	85.693	29.643	1.157.860
Consumption of fixed capital	4.887	28.096	11.330	14.255	35.466	13.842	5.288	40.020	16.853	524	29.890	6.080	206.531
Other taxes less subsidies on production (million euros)	-5.628	757	301	2.096	691	-3	3.016	9.427	-877	-11	315	-132	9.952
Other expenses, total (million euros)	30.954	93.924	439.014	114.856	264.544	66.417	43.968	72.365	88.445	8.367	115.898	35.591	1.374.343
Ratio: Marketing CE /National CE	*0,000%*	*4,531%*	*1,233%*	*0,351%*	*0,347%*	*0,498%*	*0,396%*	*1,037%*	*0,147%*	*6,205%*	*0,036%*	*0,292%*	
Other capitalized marketing expenses (million euros)	0	2.409	5.413	403	764	331	174	750	126	519	42	168	11.100
Total produced marketing assets (million euros)	**24**	**3.061**	**7.921**	**707**	**3.846**	**1.056**	**1.554**	**895**	**800**	**1.560**	**497**	**892**	**22.812**

Sensitivity analysis

Building upon this scenario, we have conducted a sensitivity analysis that encompasses a 'low scenario' and a 'high scenario,' incorporating more constrained and expansive hypotheses, respectively.

In the sensitivity analysis, the variables considered include the percentage of time attributed to 'Other occupations', the occupational status (limited to 'Employees' in the 'Low scenario' and expanded to 'Total', including both employees and self-employed people in the 'base' and in the 'high' scenarios), and the *capitalization factor* (CF), with the following thresholds:

SCENARIO DEFINITION	BASE	HIGH	LOW
ISCO-122 % time	15%	15%	15%
ISCO-243 % time	50%	50%	50%
Other occupations % time	5%	15%	0%
Other occupations	CNO 293 - 311 - 383 - 762	CNO 293 - 311 - 383 - 762	CNO 293 - 311 - 383 - 762
Occupational status	Total	Total	Employee
Capitalization factor	60%	70%	50%

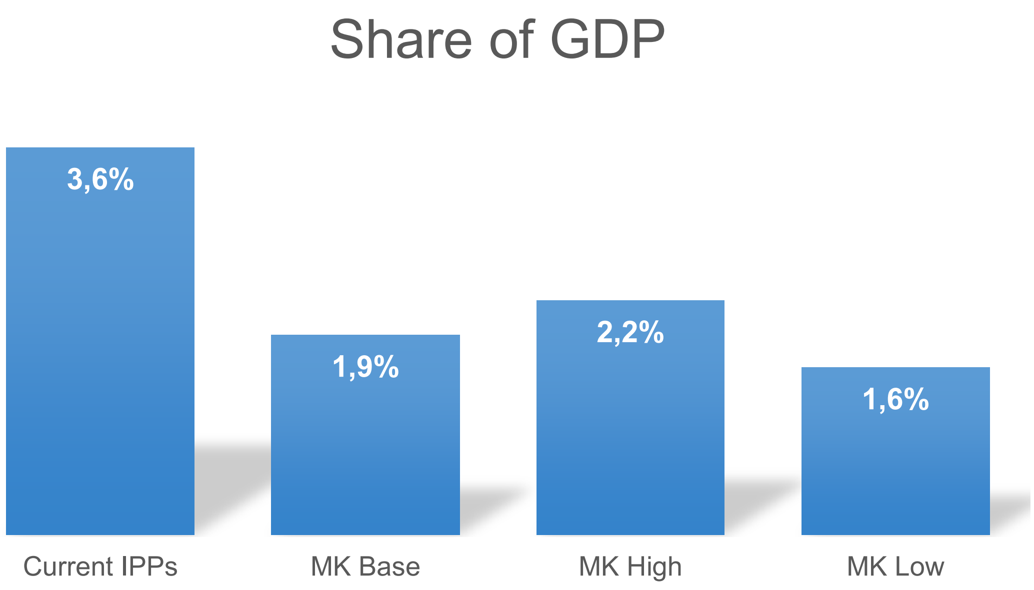
In the 'Low scenario', 'Other occupations' are excluded, and only employed workers are taken into account. Moreover, the CF applied across all industries is 0,5, except for the advertising services and market research industry, where it remains at 0,3.

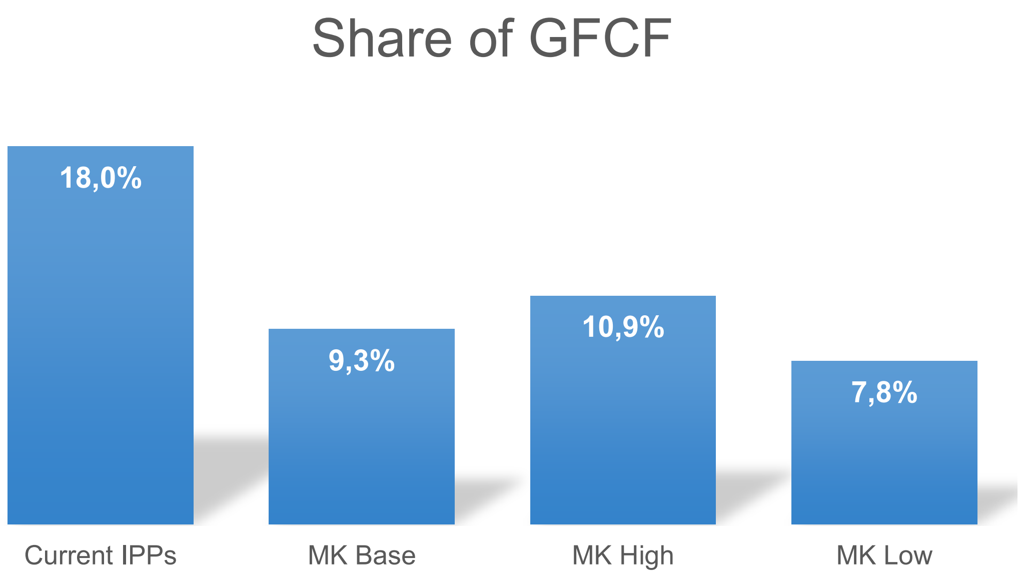
Production/gross fixed capital formation on marketing assets													
Year 2021	**NACE sections**												
	A	BDE	C	F	GHI	J	K	L	MN - ex MK	MN - MK	OPQ	RSTU	Total
Occupations (ISCO)													
122 Sales, marketing and development managers													
Average wage (euros)	-	168.152	61.200	46.471	151.125	52.254	65.013	48.855	114.237	66.841	186.523	77.127	
Nº of workers	100	950	24.475	2.200	23.825	9.450	6.000	700	5.787	10.063	2.075	4.300	89.925
% time share spent in marketing production by occupation	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	
Total= wage by worker by time (million euros)	-	9	225	15	184	74	59	5	47	101	19	25	763
243 Sales, marketing and public relations professionals													
Average wage (euros)	-	126.355	53.414	29.069	40.426	-	-	29.391	55.327	22.878	57.925	-	
Nº of workers	-	14.125	13.650	4.975	4.500	-	-	1.500	856	1.594	450	-	41.650
% time share spent by occupation	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	
Total= wage by worker by time (million euros)	-	359	365	72	91	-	-	22	12	18	5	-	944
XXX Other occupations													
Average wage (euros)	-	-	-	-	-	-	-	-	-	-	-	-	
Nº of workers	300	750	40.750	4.375	29.000	10.950	150	1.100	6.180	13.770	18.975	9.000	135.300
% time share spent by occupation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Total= wage by worker by time (million euros)	-	-	-	-	-	-	-	-	-	-	-	-	-
Marketing assets wage cost (million euros)	-	368	589	88	275	74	59	27	60	119	24	25	1.707
Compensation of employees (million euros)	7.365	11.191	73.865	38.857	130.999	28.225	19.854	5.196	68.314	3.580	180.394	31.523	599.363
Wages (million euros)	6.510	8.550	55.768	29.351	100.578	22.068	14.902	4.081	52.871	2.814	139.844	24.701	462.038
Ratio National CE/National wages	*113%*	*131%*	*132%*	*132%*	*130%*	*128%*	*133%*	*127%*	*129%*	*127%*	*129%*	*128%*	
Compensation of employees (million euros)	0	487	780	116	358	95	78	35	77	152	32	32	2.242
Marketing purchases (million euros)	40	242	2.661	280	4.378	974	2.169	150	956	2.729	649	1.053	16.280
Capitalization factor	50%	50%	50%	50%	50%	50%	50%	50%	50%	30%	50%	50%	
Capitalized marketing expenditure	20	121	1.331	140	2.189	487	1.084	75	478	819	325	527	7.594
National intermediate consumption (million euros)	31.695	65.071	427.383	98.505	228.387	52.578	35.664	22.918	72.469	7.854	85.693	29.643	1.157.860
Consumption of fixed capital	4.887	28.096	11.330	14.255	35.466	13.842	5.288	40.020	16.853	524	29.890	6.080	206.531
Other taxes less subsidies on production (million euros)	-5.628	757	301	2.096	691	-3	3.016	9.427	-877	-11	315	-132	9.952
Other expenses, total (million euros)	30.954	93.924	439.014	114.856	264.544	66.417	43.968	72.365	88.445	8.367	115.898	35.591	1.374.343
Ratio: Marketing CE /National CE	*0,000%*	*4,349%*	*1,057%*	*0,299%*	*0,273%*	*0,336%*	*0,393%*	*0,666%*	*0,113%*	*4,234%*	*0,017%*	*0,103%*	
Other capitalized marketing expenses (million euros)	0	2.306	4.639	343	567	223	173	482	95	354	19	56	9.256
Total produced marketing assets (million euros)	**20**	**2.914**	**6.750**	**599**	**3.114**	**805**	**1.335**	**592**	**650**	**1.324**	**375**	**615**	**19.092**

In the 'High scenario,' the 'Other occupations' allocate 15% of the workday to internal marketing development. Additionally, both self-employed and employed workers are assessed, with a CF of 0,7 applied across all industries, except for the *advertising services and market research* industry, where it remains at 0,3.

Production/gross fixed capital formation on marketing assets													
Year 2021	**NACE sections**												
	A	BDE	C	F	GHI	J	K	L	MN - ex MK	MN - MK	OPQ	RSTU	Total
Occupations (ISCO)													
122 Sales, marketing and development managers													
Average wage (euros)	-	168.152	61.200	46.471	151.125	52.254	65.013	48.855	114.237	66.841	186.523	77.127	
Nº of workers	100	1.150	27.300	2.375	27.075	10.075	6.050	800	6.671	13.004	2.250	4.300	101.150
% time share spent in marketing production by occupation	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	
Total= wage by worker by time (million euros)	-	10	251	17	209	79	59	6	55	130	21	25	862
243 Sales, marketing and public relations professionals													
Average wage (euros)	-	126.355	53.421	29.140	40.426	-	-	29.391	54.587	22.139	57.925	-	
Nº of workers	-	14.625	14.150	5.500	5.025	-	-	2.250	984	2.216	550	-	45.300
% time share spent by occupation	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	
Total= wage by worker by time (million euros)	-	372	378	80	102	-	-	33	14	25	7	-	1.009
XXX Other occupations													
Average wage (euros)	-	56.521	23.835	26.198	71.144	35.827	-	40.552	39.880	22.713	62.132	63.859	
Nº of workers	300	750	49.550	4.750	37.675	17.275	150	1.675	8.923	17.352	20.725	30.275	189.400
% time share spent by occupation	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	
Total= wage by worker by time (million euros)	-	3	177	19	121	93	-	10	26	59	70	138	715
Marketing assets wage cost (million euros)	-	385	806	115	431	172	59	49	95	214	97	163	2.586
Compensation of employees (million euros)	7.365	11.191	73.865	38.857	130.999	28.225	19.854	5.196	68.314	3.580	180.394	31.523	599.363
Wages (million euros)	6.510	8.550	55.768	29.351	100.578	22.068	14.902	4.081	52.871	2.814	139.844	24.701	462.038
Ratio National CE/National wages	*113%*	*131%*	*132%*	*132%*	*130%*	*128%*	*133%*	*127%*	*129%*	*127%*	*129%*	*128%*	
Compensation of employees (million euros)	0	509	1.067	153	555	220	79	63	123	272	125	211	3.377
Marketing purchases (million euros)	40	242	2.661	280	4.378	974	2.169	150	956	2.729	649	1.053	16.280
Capitalization factor	70%	70%	70%	70%	70%	70%	70%	70%	70%	30%	70%	70%	
Capitalized marketing expenditure	28	169	1.863	196	3.065	682	1.518	105	669	819	454	737	10.305
National intermediate consumption (million euros)	31.695	65.071	427.383	98.505	228.387	52.578	35.664	22.918	72.469	7.854	85.693	29.643	1.157.860
Consumption of fixed capital	4.887	28.096	11.330	14.255	35.466	13.842	5.288	40.020	16.853	524	29.890	6.080	206.531
Other taxes less subsidies on production (million euros)	-5.628	757	301	2.096	691	-3	3.016	9.427	-877	-11	315	-132	9.952
Other expenses, total (million euros)	30.954	93.924	439.014	114.856	264.544	66.417	43.968	72.365	88.445	8.367	115.898	35.591	1.374.343
Ratio: Marketing CE /National CE	*0,000%*	*4,552%*	*1,445%*	*0,393%*	*0,424%*	*0,779%*	*0,396%*	*1,204%*	*0,180%*	*7,606%*	*0,069%*	*0,670%*	
Other capitalized marketing expenses (million euros)	0	2.438	6.343	451	1.023	517	174	871	155	636	83	392	13.083
Total produced marketing assets (million euros)	**28**	**3.116**	**9.273**	**800**	**4.642**	**1.419**	**1.771**	**1.039**	**947**	**1.727**	**662**	**1.340**	**26.764**

The following graphs illustrate the relative impact of the results from this sensitivity analysis on Spain's primary macroeconomic indicators, compared to the significance of the intangible assets (intellectual property products) currently measured and already incorporated within the core framework of the national accounts under SNA 2008/ESA 2010.





5. Conclusions and next steps

The need to keep the System of National Accounts relevant for its broad range of users is clearly shared by all the statistical community. Better reflecting in the 'core' national accounts the important elements related to globalisation, digitalisation and environmental sustainability that are recommended to be included in the updated version of the System of National Accounts goes in that direction.

In particular, the measurement of intangibles within the economy holds critical importance as it reflects the value of intellectual property, innovation, and brand equity that traditional metrics may overlook. As the global economy evolves, the role of intangible assets becomes increasingly pivotal in driving growth, competitiveness, and productivity. Recognizing and accurately valuing these assets can provide a more comprehensive understanding of a country's economic health and potential for future development. This underscores the need for evolving economic models and accounting frameworks that can capture the full spectrum of value creation in the modern economy. Thus, this is an emerging challenge for official statistics and the systems of national accounts that should not be disregarded.

However, the practical challenges involved in quantifying the value of intangible assets often pose a risk to international and temporal comparability. Estimates rely on various assumptions regarding associated flows and stocks, mirroring challenges faced with other intangible assets such as R&D and software. The sensitivity analysis conducted in this experimental study on marketing assets underscores this uncertainty. To address this, precise, standardized, and timely guidance is crucial for refining these estimates, both at the European and global levels, to ensure the comparability of national accounts data over time.

Meanwhile, INE-Spain will further explore sources and methodologies for measuring marketing assets through the following steps:

- Exploring a more accurate definition of marketing products within the scope of the *advertising services and market research* (CPA 73).
- Evaluating potential instances of double counting within marketing and R&D activities.
- Assessing the implications of incorporating a profit margin into the 'sum of cost' valuation of own-account marketing, along with other potential components of this valuation, in light of the suggested new SNA principles regarding the sum of costs.
- Replicating these calculations for additional reference years to analyze the robustness of resulting investment series in terms of volatility induced by primary sources.
- Estimating deflators and subsequent series in volume terms.
- Calculating balance positions and deriving *consumption of fixed capital* estimates, based on the *Permanent Inventory Method* generally adopted in the national accounts framework. This process will involve establishing new hypotheses regarding depreciation parameters particularly referred to marketing assets.
- Developing compilation strategies for integrating marketing estimates within non-market or financial activities accounts.

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