

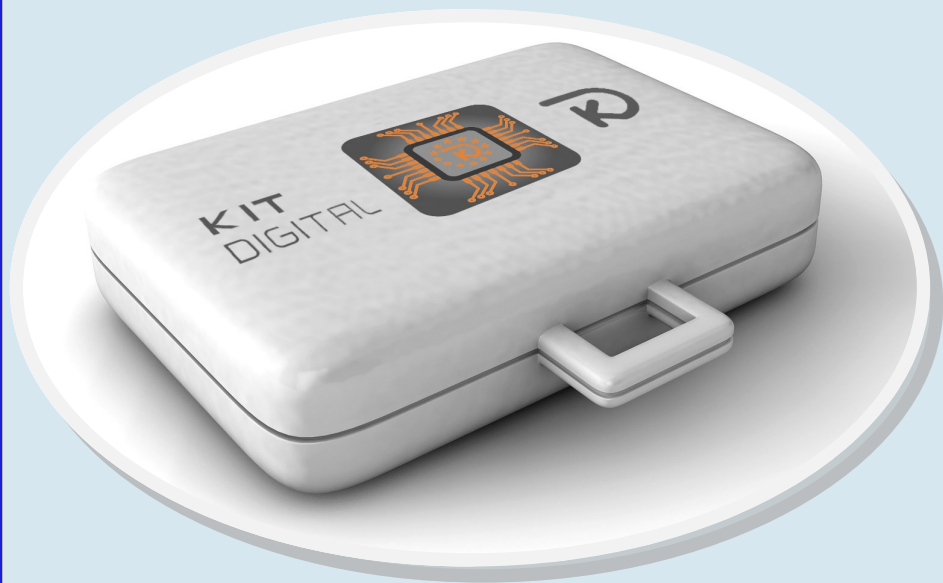
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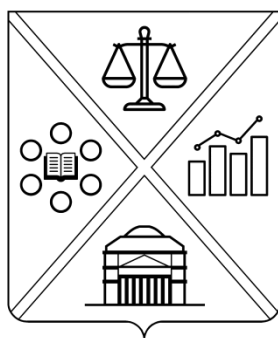
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Lights and Shades of the «Kit Digital» Grant, a Possible Case of the «European Paradox»

Article presented at the XIth EDaSS
International Conference (26 Nov. 2022)

ARNAU GUIX SANTANDREU



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**Lights and Shades of the «Kit Digital» Grant,
a Possible Case of the «European Paradox»**

Article presented at the XIth International Conference
on Economic Development and Social Sustainability

EDaSS – 26th November 2022

ARNAU GUIX SANTANDREU

RESUM / ABSTRACT

[*English*] The *Kit Digital* grant in Spain attracts many small and medium enterprises to find ways for financing their digital investments under the framework of the *Next Generation* funds, propelled by the European Union during the Post-Covid recovery plan.

In spite of the apparent good intention of this public policy and the remarkable amounts devoted to it, there are several inefficiencies that must be analysed. Such aspects allow identifying the *Digital Toolkit* as a case of the *European Paradox*. This is the concept expressed by the European Commission for the first time in 1995 that refers to the inconsistency between the significant resources destined in science and technology programmes and the limited outcomes that result in terms of competitive advantages and profitability, among other consequences and in comparison with the rest of advanced economies.

Besides, the grant does not finance the acquisition of hardware equipment, a limitation that can be explained by the strong dependence of the EU on Asian imports and the lack of control over the production of microchips, together with the external provision of the so-called rare earths. Without any doubts, the winners of the grant's existence are the technological giants of California, who sell their digital solutions to self-employed workers and companies with the intermediary action of large telecommunications and Internet providers.

Key words: *Kit Digital*, *Digital Toolkit*, *Next Generation*, *European paradox*, digitalisation, grants, microchips, semiconductors, rare earths.

[*Català*] La subvenció del *Kit Digital* a Espanya atreu nombroses petites i mitjanes empreses per trobar formes de finançar les seves inversions digitals, sota el paraigües dels fons *Next Generation*, impulsats per la Unió Europea en el pla de recuperació post-Covid.

Malgrat la aparent bona intenció d'aquesta política pública i els fons remarcables destinats a la mateixa, hi ha certes ineficiències que han de ser analitzades. Aquests aspectes permeten identificar el *Kit Digital* com un cas de l'anomenada *Paradoxa Europea*. Aquest és un concepte expressat per la Comissió Europea per primer cop l'any 1995, referit a la incoherència entre els recursos significatius destinats a programes de ciència i tecnologia i els resultats limitats que s'obtenen, en termes d'avantatges comparatius i beneficis, entre altres conseqüències i en comparació amb la resta d'economies avançades.

A més, la subvenció no finança l'adquisició d'equips físics (*hardware*), una limitació que es pot explicar per la dependència elevada de la UE respecte les importacions asiàtiques i la manca de control sobre la producció de microxips, juntament amb l'abastiment extern de les conegudes com terres rares. Sens dubte, els guanyadors de l'existència de la subvenció són els gegants tecnològics californians, que venen les seves solucions digitals a autònoms i empreses amb l'acció intermediària dels grans proveïdors de telecomunicacions i Internet.

Paraules clau: *Kit Digital*, *Next Generation*, *Paradoxa Europea*, digitalització, subvencions, microxips, semiconductors, terres rares.

[*Castellano*] La subvención del *Kit Digital* en España atrae a numerosas pequeñas y medianas empresas para encontrar formas de financiar sus inversiones digitales, bajo el paraguas de los fondos *Next Generation*, impulsados por la Unión Europea en el plan de recuperación post-Covid.

Aunque esta política esté aparentemente bien intencionada y haya fondos remarcables destinadas a la misma, existen ciertas ineficiencias que deben ser analizadas. Estos aspectos permiten identificar el *Kit Digital* como un caso de la llamada *Paradoja Europea*. Este es un concepto expresado por la Comisión Europea por primera vez en el año 1995, referido a la incoherencia entre los recursos significativos destinados a programas de ciencia y tecnología y los resultados limitados que se obtienen, en términos de ventajas comparativas y beneficios, entre otras consecuencias y en comparación con las demás economías avanzadas.

Además, la subvención no financia la adquisición de equipos físicos (*hardware*), una limitación que se puede explicar por la elevada dependencia de la UE respecto a las importaciones asiáticas y la falta de control sobre la producción de microchips, junto al abastecimiento externo de las llamadas tierras raras. Sin duda, los ganadores de la existencia de la subvención son los gigantes tecnológicos californianos, que venden sus soluciones digitales a autónomos y empresas con la acción intermediaria de los grandes proveedores de telecomunicaciones e Internet.

Palabras clave: *Kit digital*, *Next Generation*, *Paradoja Europea*, digitalización, subvenciones, microchips, semiconductores, tierras raras.

[*Français*] La subvention *Kit Digital* en Espagne attire de nombreuses petites et moyennes entreprises pour trouver des moyens de financer leurs investissements numériques dans le cadre des fonds *Next Generation*, propulsés par l'Union européenne lors du plan de relance post-Covid.

Malgré la bonne intention apparente de cette politique publique et les sommes remarquables qui y sont consacrées, plusieurs inefficacités doivent être analysées. De tels aspects permettent d'identifier la *boîte à outils numérique* comme un cas du *Paradoxe européen*. C'est le concept exprimé par la Commission européenne pour la première fois en 1995 qui fait référence à l'incohérence entre les ressources importantes destinées aux programmes scientifiques et technologiques et les résultats limités qui s'obtiennent en termes d'avantages compétitifs et de rentabilité, entre autres conséquences et en comparaison avec le reste des économies avancées.

En outre, la subvention ne finance pas l'acquisition d'équipements matériels (*hardware*), une limitation qui peut être expliquée par la forte dépendance de l'UE vis-à-vis des importations asiatiques et le manque de contrôle sur la production de micropuces, ainsi que la fourniture externe des appelées terres rares. Sans aucun doute, les gagnants de l'existence de la subvention sont les géants technologiques de la Californie, qui vendent leurs solutions numériques aux travailleurs indépendants et aux entreprises par l'action intermédiaire des grands fournisseurs de télécommunications et d'Internet.

Mots-clés : *Kit Digital*, *Next Generation*, *Paradoxe européen*, digitalisation, subventions, micropuces, semi-conducteurs, terres rares.

[Italiano] La sovvenzione *Kit Digital* in Spagna attira molte piccole e medie aziende per incontrare modi per finanziare i propri investimenti digitali nell'ambito dei fondi *Next Generation*, promossi dall'Unione Europea durante il piano di ripresa post-Covid.

Nonostante l'apparente buona intenzione di questa politica pubblica e le notevoli somme dedicate ad essa, ci sono diverse inefficienze che devono essere analizzate. Tali aspetti consentono di identificare il *Kit Digital* come un caso del *Paradosso Europeo*. È un concetto rivelato dalla Commissione Europea per la prima volta nel 1995 che fa riferimento all'incoerenza tra le ingenti risorse destinate ai programmi scientifici e tecnologici e gli esiti limitati che ne derivano in termini di vantaggi competitivi e di guadagni, tra le altre conseguenze e al confronto con il resto delle economie avanzate.

Inoltre, il contributo non finanzia l'acquisizione di apparecchiatura fisica (*hardware*), limitazione spiegabile per la forte dipendenza dell'UE dalle importazioni asiatiche e la mancanza di controllo sulla produzione di microchips, unito al provvedimento esterno delle cosiddette terre rare. I vincitori dell'esistenza della sovvenzione sono senz'ombra di dubbio i colossi tecnologici della California, che vendono le loro soluzioni digitali a lavoratori autonomi e aziende con l'azione intermedia di grandi fornitori di telecomunicazioni ed Internet.

Parole chiave: *Kit Digital*, *Next Generation*, *Paradosso Europeo*, digitalizzazione, sovvenzioni, microchip, semiconduttori, terre rare.

[Gascon/Occitan] La subvencion deu *Kit Digital* a Espanha atrai fòrça petites e mejanes entrepreses per trapar formes de finançar los seus investiments digitaus, jos lo paraploja deus hons *Next Generation*, promouuts pera Union Europèa laguens lo pla de reviviscència post-Covid.

Maugrat l'aparenta bona intencion d'aguesta politica publica e los nauts hon destinats ara madeisha, existissen certanes ineficiències que an d'èster analizades. Aguests aspèctes permeten identificar lo *Kit Digital* coma un cas dera aperada *Paradòxa Europèa*. Aguest ei un concèpte espremut pera Comission Europèa per purmèr viatge l'annada 1995, referit entara incoheréncia entre los recorsi significatius destinadi taths programes de sciéncia e tecnologia e los resultats limitats que s'obtienon, en tèrmes d'auantatges comparatius e profieits, entre autes consequéncias e en comparution damb la resta d'economies auançadas.

Ath delà, la subvencion non cobreish l'adquisicion d'equips fisics (*hardware*), ua limitacion que pòt èster espremuta pera nauta dependéncia de la UE sus es importacions asiaticas e la manca de contraròtle sus la produccion de microchips, amassa damb l'aprovediment extèrne des coneishudes coma tèrres rares. Shens dopte, los vencedors de l'existéncia de la subvencion son los gegants tecnologics californians, capables de vendre lors solucions digitaus entà trebalhadors autonòms e empreses damb l'accion intermediaria deus grans provedidors de telecomunicacions e Internet.

Mots clau: *Kit Digital*, *Next Generation*, *Paradòxa Europèa*, digitalizacion, subvencions, microchips, semiconductors, tèrres rares.

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Vestis virum reddit.

(The Clothes Make the Person)

MARCUS FABIVS QVINTILIANVS,
Institutio Oratoria



Full Article

**Lights and Shades of the «Kit Digital»
Grant, a Possible Case of the
«European Paradox»**

Lights and Shades of the «Kit Digital» Grant, a Possible Case of the «European Paradox»

1. Introduction

1.1. Overview of the ‘Kit Digital’ in Spain.

The general recovery course of action followed by the European Union (EU), two years after the outburst of the SARS-CoV-2 pandemic, has been characterised by the abundant news about the *Next Generation* funds. In Spain, part of the accorded resources will be destined to the technological update of small and medium enterprises (SMEs) under the *Kit Digital* grant programme (2021-2023). The exposed funding could be translated in English as the *Digital Toolkit* and is managed by the *Red.es* public entity with the intermediary action of the Ministry of Economic Affairs and Digital Transformation of the country. The programme is also integrated in the framework of the Digital Agenda for 2025 in Spain and the Plan for the digital transformation of SMEs in the period 2021-2025.

The main objectives are linked towards a medium-term horizon, struggling to increase the software processing capabilities of SMEs, the materialisation of productivity growth and competitiveness gains and the creation of quality labour posts. It is expected an investment of 3.067 million euros in *Digital Bonds* during the whole *Digital Toolkit* programme timespan, distributed across three broad sections: companies with 10 to less than 50 workers (Segment I, Resolution C005/22-SI), companies with 3 to less than 10 workers (Segment II, Resolution C015/22-SI) and companies with 0 to less than 3 workers (Segment III, Resolution C022/22-SI).

The *Digital Toolkit* programme is destined to Spanish SMEs in order to buy software products and services, with higher financial support depending on the size of the company. Thus, maximum available funds range up to 12.000 euros for undertakings located in the Segment I, 6.000 euros in the second segment and 2.000 euros in the third segment¹. At first sight, the programme looks robust enough and attractive for SMEs and the public opinion. The next table summarises the distributions of segments, number of workers and maximum funds available:

Section / Resolution (Red.es)	Number of workers	Maximum amount of funds
Segment I / C005/22-SI	10 to less than 50	12,000 €
Segment II / C015/22-SI	3 to less than 10	6,000 €
Segment III / C022/22-SI	0 to less than 3	2,000 €

Table 1. Distribution of Segments of the ‘Digital Toolkit’ grant.

¹ Article 18, Order ETD/1498/2021, of 29th Dec., of the Ministry of Economic Affairs and Digital Transformation.

However, there are several limitations that must be addressed. One of them, probably the most relevant, is that the funds of the initiative cannot be destined to the acquisition of hardware elements, only *digital solutions*². The explanatory reason behind this fact could be that the EU does not have a solid industrial policy to produce semiconductors, integrated circuits and electronic devices and imports them from East Asia. Nevertheless, at the software level Europeans are not more prosperous, as it is extremely difficult for them to compete against the reasonable price-quality ratio supplied by Californian technological giants.

At the end of the day, the well-intentioned resources of the *Digital Toolkit* could have more positive transatlantic implications rather than fostering the local economies in the move to the so-called 4th Industrial Revolution and the knowledge economy. Again, the *Digital Toolkit* could be an example of a multifaceted *European Paradox*³: a continent with worldwide recognised educational systems, talented citizens and remarkable investments that cannot reap the benefits that could be generated in such special circumstances (for example, increased wealth, higher salaries, better employment opportunities and drivers of innovation and competitive advantage).

1.2. Main objectives and methodology

The main objectives of the study are based on analysing the relevant aspects of the *Kit Digital* grant, evaluating this technological encouragement policy by using a pragmatic approach and finally determining a possible connection of it towards the *European Paradox* of resources and capabilities in the *Old continent*.

The methodology is based on a selected review of the grant regulations and official publications issued during the last three years by Spanish and EU institutions. Scientific literature and recent newspaper articles complement the picture. Moreover, the enquiry is complemented by studying the price-quality relationship of telecommunications providers, which have been accredited as *Digital Agents* and provide to SMEs the software solutions financed by the grant. Qualitative content analysis and close reading allow identifying the relevant orientations and weaknesses of the current policies.

2. Drawbacks behind the ‘Kit Digital’

2.1. ‘Digital bonds’ are split and do not assume the related costs integrally

The *Digital Toolkit* grant offers *Digital Bonds* that are representative of a *numerus clausus* group of categories, which are based on the services and technologies that are object of the funding, in other words, digital solutions. Some of them are redundant and eventually several important properties for businesses are excluded. For example, a small advertisement agency or a marketing department in a medium-sized company will not be able to finance a graphic design software with the financial aid. Consequently, they will be constrained to choose among the exposed designations:

² Article 19, Order ETD/1498/2021, of 29th Dec., of the Ministry of Economic Affairs and Digital Transformation.

³ EUROPEAN COMMISSION (then COMMISSION OF THE EUROPEAN COMMUNITIES) (1995): *Green Paper on Innovation*. Brussels, COM(95) 688 final, p. 5. Accessible online: https://europa.eu/documents/comm/green_papers/pdf/com95_688_en.pdf

Category	Maximum amount of funds available		
	Segment I	Segment II	Segment III
1. Website and basic Internet presence.	2,000 €	2,000 €	2,000 €
2. Electronic commerce (e-commerce)	2,000 €	2,000 €	2,000 €
3. Social media management	2,500 €	2,500 €	2,000 €
4. Customer management	4,000 € (includes 3 users)	2,000 € (includes 1 user)	2,000 € (includes 1 user)
5. Business Intelligence (BI) and analytics	4,000 € (includes 3 users)	2,000 € (includes 1 user)	1,500 € (includes 1 user)
6. Virtual office tools and services	12,000 € 250 € / user (up to 48 users)	2,250 € 250 € / user (up to 9 users)	500 € 250 € / user (up to 2 users)
7. Process management	6,000 € (includes 10 users)	3,000 € (includes 3 users)	2,000 € (includes 1 user)
8. Electronic bills	2,000 € (includes 3 users)	2,000 € (includes 3 users)	1,000 € (includes 1 user)
9. Secure communications	6,000 € 125 € / device (up to 48 devices)	1,125 € 125 € / device (up to 9 devices)	250 € 125 € / device (up to 2 devices)
10. Cybersecurity	6,000 € 125 € / device (up to 48 devices)	1,125 € 125 € / device (up to 9 devices)	250 € 125 € / device (up to 2 devices)
11. Advanced Internet presence	2,000 €	2,000 €	2,000 €
12. Marketplace	2,000 €	2,000 €	2,000 €

Table 2. Maximum amount of available funds according to the categories of destination

Moreover, this picture can disorient most of the beneficiaries, as there are categories that limit the maximum resources of the *Digital Bonds* to lower amounts and the funds cannot be transferred among subcategories; for example, companies of the first Segment (between 10 and less than 50 workers) can obtain *Business Intelligence and Analytics* solutions up to 4.000 euros, but cannot finance up to 6.000 euros in this matter by transferring funds from the utmost 2.000 euros in the *e-commerce* subcategory.

Besides, the Value Added Tax (VAT) is not included in the grant⁴, meaning that SMEs must assume it and expect compensations in the next quarterly VAT form. We can infer from it that the *Digital Bonds* do not operate as pure and effective bonds.

2.2. Europe does not resolve the strong dependence on Asia's strategic supplies

In the beginning of 2022, the European Union has experienced in a more dramatic sense the effects of the strong dependence on strategic supplies. Such scenery has been translated into a shortage crisis of microchips and other electronic components⁵. Besides, China is the major supplier of critical raw materials, reaching 62% of the EU's supply⁶. Those are the reasons why, in spite of the newest announcements of strategic endeavours like the *European Chips Act*⁷ and the foundation of a *Joint Undertaking* under *Horizon Europe*⁸, in the *Digital Toolkit* EU funds are destined to buy non-tangible assets.

Rare earths are represented by the seventeen chemical elements integrated under the category of the Lanthanides in the periodic table. As their denomination indicates well, their related minerals are scarce on our planet's crust. However, they are extremely cherished resources, with applications on precision manufacturing and electronics, including batteries and magnets for electric and hybrid cars, wind turbines, hydrogen electrolyzers and energy-efficient fluorescent lighting⁹. Naturally, the industrial sector depends on such raw resources and the semiconductors' supplies to ensure their own activities. The future of mobility and the transformations of the *Green Deal* stress even more the need to possess and control such critical assets.

Regarding semiconductors, on April 2022 Spain has experienced a radical change on the car market compared the precedent decades: three great Asian manufacturers, which are TOYOTA, HYUNDAI and KIA, are situated for the first time on the top-three positions in terms of automobile sales in the country during the whole year period¹⁰.

⁴ Article 19.2, Order ETD/1498/2021, of 29th Dec., of the Ministry of Economic Affairs and Digital Transformation.

⁵ EUROPEAN COMMISSION (2022b): *Recommendation 2022/210, of 8 February, on a common Union toolbox to address semiconductor shortages and an EU mechanism for monitoring the semiconductor ecosystem*. Official Journal of the European Union, L 35, pp. 17 20. Accessible online:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0210>

⁶ EUROPEAN POLITICAL STRATEGY CENTRE (2019): *Rethinking Strategic Autonomy in the Digital Age*. Brussels, European Commission, EPSC Strategic Notes, Issue 30, p. 8. Accessible online: <https://op.europa.eu/es/publication-detail/-/publication/889dd7b7-0cde-11ea-8c1f-01aa75ed71a1>

⁷ EUROPEAN COMMISSION (2022a): *Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. A Chips Act for Europe*. Brussels, COM(2022) 45 final. Accessible online:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52022DC0045&qid=1644663754080>

⁸ EUROPEAN COMMISSION (2022c): *Proposal for a Council Regulation amending Regulation 2021/2085, establishing the Joint Undertakings under Horizon Europe, as regards the Chips Joint Undertaking*. Brussels, COM(2022) 47 final. Accessible online:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022PC0047>

⁹ GIELEN, Dolf; LYONS, Martina (2022): *Critical Materials for the Energy Transition: Rare Earth Elements*. Masdar City, International Renewable Energy Agency (IRENA). Technical Paper 2/2022. Accessible online: https://www.irena.org/-/media/Files/IRENA/Agency/Technical-Papers/IRENA_Rare_Earth_Elements_2022.pdf

¹⁰ RODRÍGUEZ, Pau (2022): *Kia, Hyundai y Toyota se consolidan como nuevos líderes en España*. Coche Global (01.04.2022). Accessible online: https://www.coheglobal.com/mercado/kia-hyundai-toyota-nuevos-lideres-ventas-marcas-modelos-coches-espana_628985_102.html

The traditional leaders, SEAT and VOLKSWAGEN, who have factories on-site and employ thousands of workers in Spain and the rest of Europe, have been displaced by Asian competitors thanks to their ability to guarantee the microchip deliveries in rough times. This advantage has origins on better trade agreements among companies and the geographic proximity from the semiconductors' larger production centres.

The trend has followed the same course of action during the rest of the 2022 year. Therefore, the Asian automotive *trident* is capable to deliver a car to the Spanish customers with a time span of two to three months on average, a rhythm which is quite similar to the verge of the semiconductors shortage crisis. In contrast, European car manufacturers have moved their deliveries beyond six to eight months¹¹. Customers do not want to delay their acquisitions and of course consider the Asian supply, which is also respected for a good price-quality ratio and a reliable after-sales service support.

Another key factor have been the restrictions of mobility to old vehicles in certain metropolitan areas, assuming broadly that their emissions of pollutants are higher because of their age; in consequence, many customers have felt forced to buy a new car and considering prices and electric autonomy have opted for the hybrid models. Asian manufacturers have shown a strong expertise at developing such technologies and they have installed plants in Europe to fulfil the local markets. For example, TOYOTA has in the continent five manufacturing sites in the European Union, two factories in the United Kingdom and another facility in Turkey. With a workforce of 21,000 persons, they produce seven out of ten TOYOTA cars sold in Europe¹². Moreover, HYUNDAI has established the European headquarters, design and R&D centres in Germany, and its production plants are located in Czech Republic and Turkey¹³.

The current conflict in Eastern Europe may evoke a change in the World order towards a *multipolar* framework, or eventually a *bipolar* setting. China is the emerging or rising power and the United States is the ruling or hegemonic power. History is full of interesting examples which show how tensions among competing nations may provoke bellicose clashes with unexpected outcomes, following the formulation of the so-called *Thucydides trap*.

This metaphoric scheme comes from the deep analysis elaborated by the Greek historian Thucydides about the Peloponnese war among Athens and Sparta¹⁴. If Europe wants to maintain her interests she shall strive at maintaining the strategic autonomy on technological issues, diversifying the supplies and ensuring the creation of semiconductors' industries in the continent's territory with enough critical mass to satisfy the regional needs.

¹¹ LIFONA, Daniel (2022): *Toyota, Kia, Hyundai... y una excepción europea: las marcas de coches que triunfan en España*. Expansión (02.09.2022). Accessible online:

<https://www.expansion.com/empresas/motor/2022/09/02/6311aa45468aeb03048b4611.html>

¹² TOYOTA EUROPE (2022): *Toyota's European Manufacturing Plants. Production facilities spanning the continent*. Accessible online: <https://www.toyota-europe.com/about-us/toyota-in-europe/european-manufacturing-plants>

¹³ HYUNDAI MOTOR COMPANY (2022): *Made in Europe. Making a mark on the continent*. Accessible online:

<https://www.hyundai.com/eu/about-hyundai/company/made-in-europe.html>

¹⁴ ALLISON, Graham (2015): "The Thucydides Trap. Are the U.S. and China Headed for War?". *The Atlantic*. Accessible online:

<https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/files/Allison%202015.09.24%20The%20Atlantic%20-%20Thucydides%20Trap.pdf>

2.3. Spanish ‘Digital Agents’ offer solutions shaped in Silicon Valley

Smartly, large telecommunications providers of Spain have been accredited publicly as *Digital Agents* and are offering *easy* and compact packs to SMEs in order to become beneficiaries of the *Digital Bonds*, including solutions that are representative of all twelve categories. Consequently, grants are managed by subsidiaries of such telephone and Internet providers and funds are destined to the acquisition of non-tangible assets intermediated by them, which are shaped essentially in Silicon Valley area.

For example, in the category of *Virtual office tools and services*, the one with the highest financing possibilities (up to 12,000 euros for companies of the first segment, which is equivalent to the maximum grant for a single company), the *Big Four* telecommunications corporations of Spain offer the services from GOOGLE and MICROSOFT. Their relationships are knotted as represented in the following table:

<i>Digital Bonds. Solutions for Virtual office tools and services</i>		
Internet and telephone provider	Digital solution maker	Prices for Segment I¹⁵
ORANGE	MICROSOFT	200.00 € / user / year
TELEFÓNICA	MICROSOFT	126.67 € / user / year
	GOOGLE	100.80 € / user / year
VODAFONE	MICROSOFT	237.60 € / user / year
	GOOGLE	236.40 € / user / year
YOIGO (XFERA MÓVILES)	MICROSOFT	250.00 € / user / year
-	MICROSOFT (as direct software provider)	100.80 € / user / year ¹⁶
-	GOOGLE (as direct software provider)	138,24 € / user / year ¹⁷

Table 3. Connections among Internet and telephone providers and Californian giants.

Such pieces of software allow greater compatibility among devices, but in practice their real costs are substantially much lower than the effective grant’s value, hence the wide range of prices among providers. As most of the digital solutions are financed for an annual period only, in the long run SMEs have the risk of becoming dependent on artificially expensive software, rather than obtaining improvements in their own efficiency levels.

¹⁵ All prices were published and recorded on 12 November 2022. Normally, in this category Internet and telephone providers maintain the same prices for Segments II and III.

¹⁶ Charge for the *Office 365 E1* pack of *Microsoft 365* ®. Website adapted to the Spanish customers.

¹⁷ Charge for the *Business Standard* pack of *Google Workspace* ®, which costs 12 US\$ / user / month. Price in euros considering the US Dollar – Euro rate on 12 November 2022 (1 US\$ = 0.96 €).

What is more, micro and small undertakings can use free accounts without suffering from difficulties of capacity, a pragmatic trend that experts have qualified as *bootstrapping*. We should not forget that GOOGLE and MICROSOFT are global companies and naturally they offer their services at their own websites, with a wide range of packs suited to different customer profiles; of course, every Spanish company or entrepreneur is able to purchase such digital solutions without the actions of intercessors. In the following table, we can appreciate how Internet and telecommunications providers have adjusted the prices near the maximum grant amounts:

Category	Maximum amount of funds available	Prices for each category fixed by Internet providers ¹⁸		
	Segment I	TELEFÓNICA	ORANGE	VODAFONE
1. Website and basic Internet presence.	2,000 €	697.40 €	1,100 €	2,000 €
2. Electronic commerce (e-commerce)	2,000 €	1,020.80 €	2,000 €	2,000 €
3. Social media management	2,500 €	2,500 €	2,500 €	2,500 €
4. Customer management	4,000 € (includes 3 users)	3,932.40 €	4,000 €	4,000 €
5. Business Intelligence (BI) and analytics	4,000 € (includes 3 users)	3,932.40 €	2,300 €	4,000 €
6. Virtual office tools and services	12,000 € 250 € / user (up to 48 users)	126 € / user (MICROSOFT) 100.80 € / user (GOOGLE)	200 € / user (MICROSOFT)	250 € / user (MICROSOFT or GOOGLE)
7. Process management	6,000 € (includes 10 users)	4,555.85 €	From 800 up to 6,400 euros	6,000 €
8. Electronic bills	2,000 € (includes 3 users)	664 €	1,500 €	1,000 €
9. Secure communications	6,000 € 125 € / device (up to 48 devices)	67.5 € / user (maximum 10 users)	125 €	6,000 € or 125 € / device
10. Cybersecurity ¹⁹	6,000 € 125 € / device (up to 48 devices)	47.88 € / device	125 € / device	125 € / device

Table 4. Comparison of prices among three telecommunications providers, related to ‘Kit Digital’ categories

¹⁸ Prices announced at websites do not include the VAT or other taxes. Services are offered for a whole year period.

¹⁹ Categories 11 (*Advanced Internet presence*) and 12 (*Marketplace*) are not offered in the first Segment of beneficiaries.

3. Conclusions

The *Kit Digital* or *Digital Toolkit* grant has a well-intentioned departing point and pretends to improve the productivity and competitiveness of Spanish SMEs in the framework of the EU's *Next Generation* funds and the post-Covid-19 recovery plan.

However, it represents a possible candidate to illustrate the *European Paradox* in technological investments: most of the extraordinary resources devoted on it would have greater implications for Silicon Valley's giants instead of reinforcing the innovative tissue of the *Old continent*.

In the context of the digital transformation, we can observe that the EU rejects financing Asian imports on hardware elements, but at the end of the day, via the intermediary action of large telecommunications providers, the supranational organisation embraces Californian software solutions, an option that is not satisfactory on a long-term tactical basis.

Besides, as investments are destined to acquire non-tangible assets only, such properties may expose SMEs to the dangers of obsolescence and the lasting dependency on high-priced services, eroding their financial sustainability and willingness to adopt new software in the long term.

For such reasons, it is urgent that European funds are channelled towards the creation of semiconductors' factories on the continents' land with the purpose of fulfilling the internal demand or at least guaranteeing the minimum strategic capacity, the development of competitive software providers in Europe, the international diversification on critical supplies and the development of new materials which require less dependence on imports and benefit from the circular economy improvements.

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Lights and Shades of the «Kit Digital» Grant, a Possible Case of the «European Paradox»

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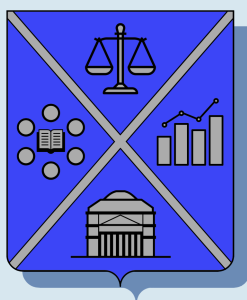
ABSTRACT

The *Kit Digital* grant in Spain attracts many small and medium enterprises to find ways for financing their digital investments under the framework of the *Next Generation* funds, propelled by the European Union during the Post-Covid recovery plan.

In spite of the apparent good intention of this public policy and the remarkable amounts devoted to it, there are several inefficiencies that must be analysed. Such aspects allow identifying the *Digital Toolkit* as a case of the *European Paradox*. This is the concept expressed by the European Commission for the first time in 1995 that refers to the inconsistency between the significant resources destined in science and technology programmes and the limited outcomes that result in terms of competitive advantages and profitability, among other consequences and in comparison with the rest of advanced economies.

Besides, the grant does not finance the acquisition of hardware equipment, a limitation that can be explained by the strong dependence of the EU on Asian imports and the lack of control over the production of microchips, together with the external provision of the so-called rare earths. Without any doubts, the winners of the grant's existence are the technological giants of California, who sell their digital solutions to self-employed workers and companies with the intermediary action of large telecommunications providers.

Keywords: *Kit Digital*, *Digital Toolkit*, *Next Generation*, *European paradox*, digitalisation, grants, microchips, semiconductors, rare earths.



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