

## Is Horizon 2020 really more SME-friendly? A look at the figures

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Small- and medium-sized enterprises (SMEs) play a key role in the EU economy.<sup>1</sup> According to the latest “SME performance review” published by the European Commission,<sup>2</sup> in 2014 there were 22 million SMEs active in the non-financial business sectors, generating more than €3.7 trillion in added value and employing approximately 90 million people. SMEs’ contribution to the European economy becomes even more apparent if one considers that 99 out of every 100 enterprises active in the EU non-financial economy are SMEs, and that these firms account for about 67% of the total employment and some 60% of the overall added value produced in Europe. Against this background, enhancing the competitiveness of European SMEs is essential in order to foster the competitiveness of the EU economy as a whole. And since the competitiveness of European SMEs in the global arena largely depends on their ability to innovate,<sup>3</sup> unlocking the innovation potential of SMEs becomes pivotal to fostering growth and jobs in Europe.

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<sup>1</sup> SMEs are defined as enterprises employing less than 250 persons and having an annual turnover of less than €50 million and/or their balance sheet total is less than €43 million (see Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises, Official Journal L 124, 20/05/2003, p.0036–0041; and the European Commission’s “User guide to the SME definition” (<http://ec.europa.eu/DocsRoom/documents/10109/attachments/1/translations/en/renditions/native>).

<sup>2</sup> P. Muller, C. Caliendo, D. Gagliardi and C. Marzocchi (2015), “Annual Report on European SMEs 2014/2015 – SMEs start hiring again”, European Commission. Interestingly, the definition of SME adopted in this report is solely based on the number of people employed.

<sup>3</sup> See inter alia D. Smallbone, D. North and I. Vickers (2003), “The role and characteristics of SMEs in innovation”, in B.T. Asheim et al., *Regional Innovation Policy for Small-Medium Enterprises*, Cheltenham: Edward Elgar; E. Golovko and G. Valentini (2011), “Exploring the complementarity between innovation and export for SMEs’ growth”, *Journal of International Business Studies*, 42 and J.H. Love and S. Roper (2015), “SME innovation, exporting and growth: A review of existing evidence”, *International Small Business Journal*, 33.

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The need to stimulate innovation and encourage a larger participation of SMEs in research and innovation programmes has been acknowledged by the EU institutions<sup>4</sup> and duly taken into account when designing Horizon 2020, the Framework Programme of the EU that is expected to contribute some €80 billion to research and innovation activities over the period 2014-20. To be sure, Horizon 2020 represented a breakthrough compared with past Framework Programmes: for the first time, in addition to the traditional support for research and development, the programme placed great emphasis on innovation and close-to-market activities. In addition, the rules for participation have been streamlined and made more SME-friendly. The Commission aims at granting SMEs no less than 20% of the total combined budget allocated to the ‘pillar’ “Societal challenges” and the specific objective “Leadership in Enabling and Industrial Technologies” (LEIT). In other words, some €8.5 billion, i.e. more than 10% of the total Horizon 2020 budget, are expected to support research and innovation activities carried out by SMEs. A share of these resources will be granted via the so-called SME Instrument, i.e. a preferential funding scheme that will earmark €3 billion over the period 2014-20 for SMEs. The remainder is expected to be assigned by means of collaborative projects funded by larger Horizon 2020 calls. Additional opportunities for research-intensive SMEs are provided by equity and debt financial instruments under the specific objective “Access to risk finance”<sup>5</sup> and by the second “Eurostars Joint Programme”<sup>6</sup> promoting market-oriented transnational research activities.

At first glance, the results of the first round of Horizon 2020 calls (completed in 2014) went beyond expectations. In particular, 23% of the financial contribution allocated under the LEIT and the “Societal challenges” pillar have been absorbed by SMEs, thus exceeding the initial minimum target (20%).<sup>7</sup> However, enthusiasm for these preliminary results should be tempered. In fact, as shown in *Figure 1*, the share of SMEs among total applicants, funded applicants and granted funds were all higher in the previous Framework Programme (FP7) than in the Horizon 2020 calls completed in 2014. Preliminary results including more recent Horizon 2020 calls are in line with figures registered in 2014.

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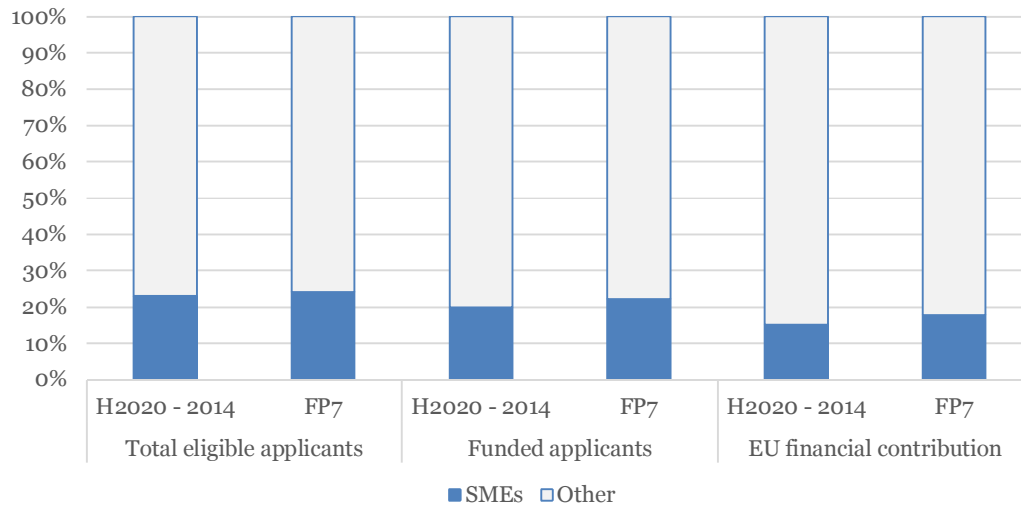
<sup>4</sup> See inter alia Commitment number 7 “SMEs in Research and Innovation Programmes” of the Innovation Union: “The Commission will design future EU research and innovation programmes to ensure simple access and stronger involvement of SMEs, in particular those with a high growth potential. [...]”.

<sup>5</sup> About €2.8 billion are allocated to calls under the specific objective “Access to risk finance”; one third of this budget is expected to support Research, Development, and Innovation-driven SMEs (companies whose business plan is significantly based on carrying out R&D and/or innovation activities) and small midcaps (large companies with up to 499 employees in full-time equivalents).

<sup>6</sup> This programme has a budget of some €1.2 billion and is co-funded by EUREKA member countries (about 75%) and the EU Horizon 2020 Programme (about 25%).

<sup>7</sup> Framework Programmes Reporting, eCORDA – External Common Research Data Warehouse.

Figure 1. SME funding - A comparison between FP7 and Horizon 2020



Source: Author's own elaboration based on data from eCorda (External Common Research Data Warehouse).

Furthermore, the new target set by the Commission for SME involvement (€8.5 billion) is only €1 billion higher than the total amount allocated to SMEs under the FP7, which seems hardly sufficient, especially when considering that the overall Horizon 2020 budget almost doubled the total EU financial contribution compared to the previous programme. Finally, Horizon 2020 aims at financing, in addition to research and development, innovation and close-to-market activities that tend to generate a faster return on investment: accordingly, this programme should in principle be far more attractive to SMEs than its predecessors, even in the absence of any specific target or preferential instrument. In fact, SMEs have a tendency to be more market-driven than research-driven<sup>8</sup> and, due to financial constraints, generally prefer shorter payback periods.

Possible explanations to the limited involvement of SMEs in Horizon 2020 can be found in some barriers still impinging on their participation. In this respect, some members of the CEPS Task Force on Innovation and Entrepreneurship<sup>9</sup> pointed out that SMEs: i) are often unaware of the (complex system of) existing support schemes; ii) face substantial obstacles in drafting convincing proposals due to limited time and resources and inadequate access to skills and knowledge (including linguistic skills); iii) have considerable difficulties in finding partners and in building and managing international consortia; iv) have limited access to finance to complement EU funds when required (e.g. in Innovation Actions and SME Instrument).

<sup>8</sup> See OECD (1997), "Small Business, Job Creation and Growth: Facts, Obstacles and Best Practices".

<sup>9</sup> The CEPS Task Force on "Unleashing Innovation and Entrepreneurship in Europe: People, Places and Policies" (chaired by José Manuel Leceta and coordinated by Andrea Renda) gathered together a group of academics and practitioners, as well as EU and national institutions, to reflect on and take stock of any progress achieved in the areas of innovation and entrepreneurship in Europe. The Task Force met four times in the course of 2015. Its final report will be published shortly on the CEPS website.

In addition, the selection criterion related to the operational capacity, which requires that applicants have the professional competencies and qualifications needed to complete the proposed action or work programme, may represent another obstacle for SMEs, especially for newcomers that are not able to invest in large teams or infrastructure before getting funded.

On a more general note, besides revolving around quantitative goals, it would be at least equally important to consider qualitative aspects. In addition to granting more funds to more SMEs, in order to unlock their innovation potential it is necessary to ensure that such companies play a salient role in funded projects. In this respect, the evaluators of Horizon 2020 proposals should carefully assess the expected contribution of SMEs in Horizon 2020 consortia and reflect on the quality of their involvement in the final evaluation. This can be certainly done via the assessment of the 'impact' criterion (e.g. when giving marks to the impact on "competitiveness and growth of companies") as well as the 'quality of implementation' criterion (e.g. when giving marks to the "coherence and effectiveness of the work plan" as well as to "complementarity of the participants").

Some of the distortions generated by placing too much emphasis on quantitative targets are apparent when considering the new 'SME instrument' introduced by Horizon 2020. Among the main innovations of this preferential scheme, which reflect the lessons learnt from the FP7,<sup>10</sup> are the earmarking of financial resources exclusively for SMEs and the acceptance of applications from single entities (as opposed to consortia). As a matter of fact, the lion's share of applications received so far have been submitted by single entities.<sup>11</sup> According to some stakeholders, however, the 'SME instrument' might end up discouraging cooperation since it does not allow the submission and/or implementation of two or more projects at the same time by the same applicant.<sup>12</sup> In other words, SMEs are less willing to join consortia as 'minority' partners, since they would then risk losing the opportunity to submit their 'own' project in the future. This, in turn, might negatively affect the quality of participation. Insofar as team work and international cooperation in research and innovation consortia can result in larger benefits for participants and the society as a whole,<sup>13</sup> despite its virtues, the 'SME instrument' appears hardly sufficient to achieve a more effective involvement of SMEs in Horizon 2020.

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<sup>10</sup> In fact, prior to 2012, the quantitative target for SMEs' participation in FP7 was far from being achieved. Only an increase and strengthening of measures tailored for SMEs in the final years of the programme allowed a significant increase in the budget share allocated to SMEs (M. Dinges et al., 2013, "SMEs participation under Horizon 2020", European Parliament).

<sup>11</sup> In 2014, almost 90% of the "SME Instrument" proposal were submitted by single entities, this share was higher than 90% within Phase 1 calls and around 75% in Phase 2 calls (Framework Programmes Reporting, eCORDA - External Common Research Data Warehouse on 16 December 2015).

<sup>12</sup> This issue was raised by SMEs participating in the Horizon 2020 Stakeholders' consultation meetings ("Tavolo di Consultazione Horizon 2020") that have been periodically arranged by the Italian Space Agency since 2014.

<sup>13</sup> Companies that are part of international research and innovation consortia have better performance in terms of exports, turnover, employment and productivity when compared to companies performing similar activities as single entities (see Danish Agency for Science, Technology and Innovation, "Economic Impact of International Research and Innovation Cooperation - Analysis of 25 years of Danish participation in EUREKA", 2011).

In summary, while Horizon 2020 correctly tried to couple research with innovation and successfully met the quantitative target for funding SMEs, more ambitious, quantitative and qualitative targets must be set, and further obstacles to SME participation must be removed before the full potential of SMEs can be fully harnessed to put Europe back on the road to recovery. The stakes are high, and EU institutions are already taking new initiatives, for instance by creating new financial instruments<sup>14</sup> or providing indirect support<sup>15</sup> to SMEs. The failure to enable the highest-quality participation by SMEs remains the Achilles' heel of the current system. Quality aspects are expected to be central in the mid-term review of Horizon 2020 that is planned for the third quarter of 2016, and some strategic changes in the programme might be necessary.<sup>16</sup> In the meantime, this issue may be addressed by instructing evaluators to reward those proposals where SMEs play a more central role.<sup>17</sup> Further research is needed on how to motivate more effective SME participation in future research and innovation programmes, how to maximise the impact of grants on SMEs' capacity to innovate and compete at a global level and how to devise new targets and indicators to monitor such achievements.

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<sup>14</sup> In this respect, under Horizon 2020 the European Commission and the European Investment Bank (EIB) Group have launched a new generation of financial instruments and advisory services to improve access to finance for innovative firms. InnovFin (debt and equity) financial products are expected to make available up to €24 billion (combining Horizon 2020 and EIB Group's resources). In particular, while InnovFin SME Guarantee provides guarantees and counter-guarantees on debt financing to SMEs (between €25,000 to €7.5 million per company), InnovFin SME Venture Capital (total amount up to €1.6 billion) provides equity finance to early-stage research and innovation-driven enterprise.

<sup>15</sup> The Horizon 2020 objective "Innovation in SMEs" aims inter alia at providing tailored services and projects (e.g. innovation management, IPR management), networking and mobilisation actions, and support to the Enterprise Europe Network that facilitates SMEs' access to funding opportunities.

<sup>16</sup> Article 22 of the Regulation establishing Horizon 2020 calls for undertaking a quantitative and qualitative assessment of SME participation as part of the evaluation and monitoring arrangements (Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC).

<sup>17</sup> Interestingly, as things now stand, when two proposals have the same score for all the evaluation criteria, the proposal with the larger size of budget allocated to SME has priority in the ranking.