INSTITUT FÜR DEMOSKOPIE ALLENSBACH

Luxembourg Business Compass

17th Survey Wave May 2018

TABLE OF CONTENTS

Page
INTRODUCTION1
FINDINGS
Luxembourg business leaders remain optimistic about the economic outlook
The effects of the Rifkin study on the Luxembourg economy so far tend to be assessed as slight; many business leaders are not well informed about the study
In the view of business leaders, Luxembourg's competitiveness has continued to improve, but the lack of qualified staff is becoming increasingly problematic
A majority of companies assess their current business situation as good and they continue to anticipate a positive trend in the near future. In comparison to last year, however, their expectations are more subdued
The majority of companies are planning to expand their budgets for digitalization, introducing new products and services, IT, and for recruiting new staff and training

APPENDIX

Survey data

INTRODUCTION

In April 2009, top decision-makers at the largest companies in Luxembourg, as defined by the number of employees, were interviewed for the first time within the framework of the *Luxembourg Business Compass*. Using this instrument, the aim was to establish an economic indicator—for the first time ever—that could be employed to ascertain Luxembourg business leaders' expectations regarding the future economic trend in Luxembourg at regular intervals. The survey focuses particularly on how business leaders expect the Luxembourg economy will develop in the next 12 months, along with their expectations and plans for their own companies' future development. These core questions are supplemented by varying questions pertaining to business or politics.

In April/May 2018, the survey for the *Luxembourg Business Compass* was conducted for the seventeenth time. As with the prior survey waves, the INSTITUT FÜR DEMOSKOPIE ALLENSBACH was commissioned by KPMG S.A.R.L. to design the survey methodologically, develop the questionnaire in cooperation with the client, confidentially process the anonymous data collected and compile a report on the findings. After being notified about the survey in writing or by telephone, a total of 49 top decision-makers were interviewed using an online questionnaire in English in the time from April 16 – May 14, 2018. As in all of the previous survey waves, it was also possible to draw a top-notch sample for the present survey: in 14 percent of the cases, the interview was completed by the company owner him- or herself, while about three quarters of the respondents belong to the executive board of their companies (74 percent), and the remaining 12 percent hold other executive positions.

The companies were selected based on the STATEC directory, "Les principaux employeurs au Luxembourg d'après l'effectif classés par branche d'activité économique de la NACE Rév.2, Situation au 1er janvier 2017 (édition juin 2017)." In drawing the sample, companies were selected from the different business sectors in line with these sectors' share of the gross domestic product in Luxembourg. Within

the different economic sectors, the largest companies—as determined by the number of employees—were included in the investigation.

The present report summarizes the most important findings of the study and presents them in graphic form. The report is supplemented by a basic volume of tables showing the responses to all questions in tabular form.

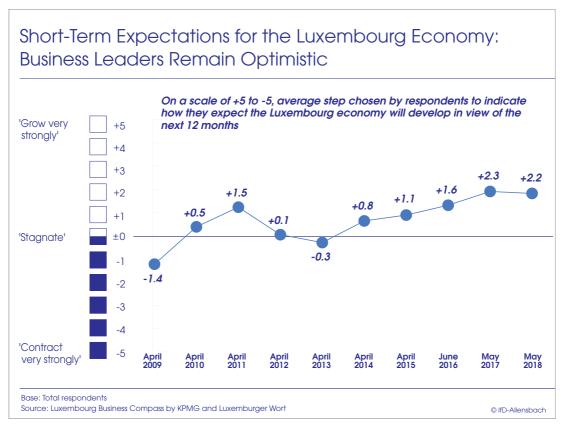
Allensbach on Lake Constance, INSTITUT FÜR DEMOSKOPIE ALLENSBACH June 6, 2018

FINDINGS

Luxembourg business leaders remain optimistic about the economic outlook

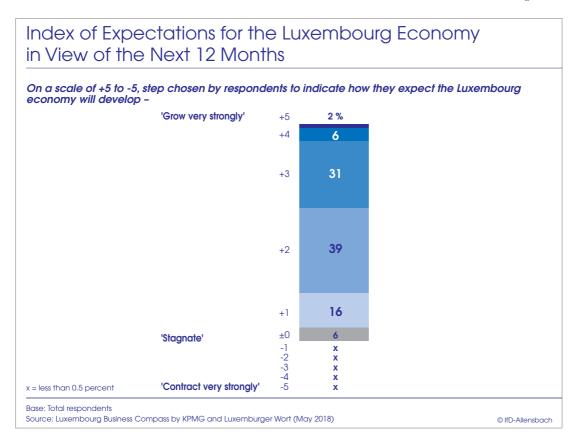
In the view of Luxembourg business leaders, the country's economy will continue to grow substantially in the coming year. Their expectations for the economic development remain at practically the same high level that was measured last year. On an 11-step scale ranging from '-5' ("economy will contract very strongly") to '+5' ("economy will grow very strongly"), respondents currently choose an average value of +2.2 to describe how they expect the Luxembourg economy will develop over the next 12 months (Figure 1).

Figure 1



In this regard, business leaders' expectations for the next 12 months are very homogeneous, with 70 percent of all respondents choosing steps +2 and +3 on the scale, along with 8 percent who expect even stronger economic growth. Only 16 percent anticipate a somewhat lower level of growth and a small share of 6 percent believe the economy will stagnate. None of the business leaders interviewed expect that the economy will contract over the next 12 months (Figure 2).

Figure 2



The effects of the Rifkin study on the Luxembourg economy so far tend to be assessed as slight; many business leaders are not well informed about the study

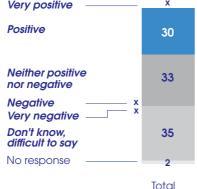
In November 2016, the strategic study compiled for Luxembourg by Jeremy Rifkin and his team, "The Third Industrial Revolution," was presented. The study suggests ways to transform the Luxembourg economy into a sustainable smart economy. Based on the study's findings and recommendations, an action plan was adopted in 2017 and nine working platforms were created in order to examine how the recommendations could be implemented in various economic and social sectors.

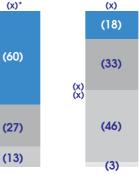
When it comes to the actions taken based on the Rifkin study so far, Luxembourg business leaders tend to assess the effects as more positive than negative, even if none of the respondents assess the effects as very positive (Figure 3). On the whole, however, the impact on the Luxembourg economy so far predominantly tends to be assessed as slight: only 6 percent of the entrepreneurs interviewed perceive a large impact, while 33 view the impact as not very large and 16 percent say it is not large at all. No business leaders say that the actions have had a very large impact. It is striking that a sizeable share of 45 percent of all respondents express no opinion on the impact of these actions (Figure 4). In response to the question of whether the effects have generally been positive or negative, the share of business leaders who are undecided is also noticeably high, at 35 percent. This is related to the fact that more than two thirds of respondents say that they are either not very well informed or not well informed at all about the Rifkin study. Only 30 percent assess themselves as well informed or very well informed about the study (Figure 5).

Those respondents who are (very) well informed about the study predominantly tend to assess the effects of the actions taken based on the study as being positive, whereas respondents who are either not very well informed or not well informed at all are more likely to give a neutral assessment, rather than a positive one (Figure 3).¹

- 5 -

¹ Due to the small number of cases, these results are only to be interpreted as tendential findings.





Total respondents

Regarding the Rifkin study, respondents who feel -

(very) well informed not very/not at all well informed

x = less than 0.5 percent

* = small number of cases (n = 15 / n = 33), so the results are only to be interpreted as tendential findings

Base: Total respondents

Source: Luxembourg Business Compass by KPMG and Luxemburger Wort (May 2018)

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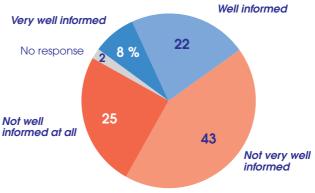
Figure 4

Business Leaders Generally Do Not Feel that the Rifkin Study Has Had a Large Impact on the Luxembourg Economy So Far Question: "How much impact have the actions taken based on the Rifkin study had on the Luxembourg economy so far?" **Business leaders who assess** the impact of the actions taken based on the Rifkin study on the Luxembourg Very large economy as -Large __ 33 % Not very large Not large at all Don't know, 45 difficult to say Total respondents x = less than 0.5 percent Base: Total respondents Source: Luxembourg Business Compass by KPMG and Luxemburger Wort (May 2018) © IfD-Allensbach

Most Business Leaders Are Not Well Informed about the Rifkin Study

Question: "In 2016, Jeremy Rifkin's strategic study for Luxembourg, 'The Third Industrial Revolution', was presented. It suggests various measures to be taken in order to transform the Luxembourg economy. Overall, how well informed are you about the Rifkin study?"

Regarding the Rifkin study, respondents who feel they are –



Base: Total respondents

Source: Luxembourg Business Compass by KPMG and Luxemburger Wort (May 2018)

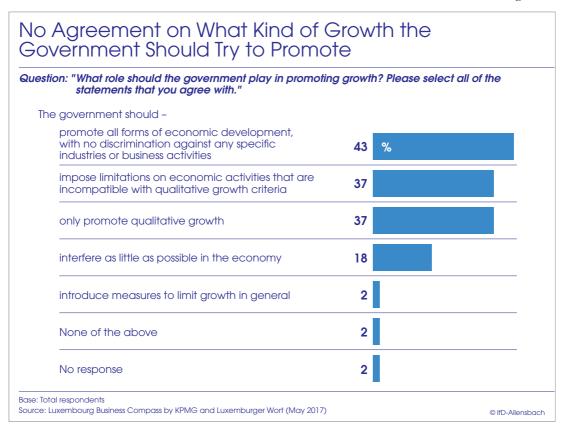
The goals of most of the nine working platforms that were created in order to implement the Rifkin study in various economic and social sectors are more frequently perceived as unclear by respondents, rather than as clear. This is especially true with respect to the working platform on "Employment and Social Issues," yet also applies to the "Luxembourg Sustainable Development Finance Platform," along with the platforms focusing on "Health," "Energy" and "Industry." Only the goals of the "Mobility" working platform are perceived considerably more frequently as clear than as unclear by Luxembourg business leaders. When it comes to this question too, however, large shares of respondents are undecided—a finding that must be viewed in light of the fact that a large share of business leaders are not well informed about the Rifkin study. This is also why the goals of none of the nine platforms are assessed as "clear" by an absolute majority of respondents (Figure 6).

Figure 6

uestion: "In 2017, the proposed measures were transformed in working platforms were created. Would you say that various platforms are clear or unclear?"		
		e working platforms
	are unclear	are clear
Mobilité (Mobility)	29	43 %
Economie circulaire (Circular economy)	28	33
Luxembourg Sustainable Development Finance Platform	27	22
Conseil National pour la Construction Durable (Sustainable construction)	18	21
Travail, Emploi et Questions Sociales (Employment and Social issues)	35	18
Santé (Health)	23	16
Intensification durable de l'agriculture (Sustainable agriculture)	16	16
Energiezukunft Lëtzebuerg (Energy)	20	16
Groupe de Haut Niveau TIR Industrie (Industry)	23	10
Not depicted: Don't know, no response		

One key question raised by the debate in connection with the Rifkin study is what role the government should play in managing economic growth in Luxembourg: to what extent should the government focus on promoting qualitative growth, that is, growth in the sense of the Rifkin study? There is no consensus among business leaders in this regard: 43 percent state that the government should promote all forms of economic growth, without discriminating against any specific business sectors or business models, whereas 18 percent are of the opinion that the government should interfere as little as possible in the economy. In contrast, 37 percent say that the government should only promote "qualitative growth," while an equally large share of 37 percent even say that the government should try to limit economic activities that are incompatible with qualitative growth criteria. Only 2 percent of respondents, however, agree with the idea that the government should aim to limit economic growth in general (Figure 7).

Figure 7



The widespread calls for qualitative growth are, however, to be interpreted with caution, since there is obviously no widely shared understanding among Luxembourg business leaders about what qualitative growth actually means. Thus, in response to a completely open question, 29 percent of the respondents associate "qualitative growth" with the concept of "sustainability," or provide other related explanations. An additional 10 percent refer in their responses to the need to ensure that growth is socially compatible, that economic growth is beneficial for all segments of society. In contrast, 27 percent explain the term solely in connection with economic criteria, stating, for example, that qualitative growth means higher productivity or an increase in the number of operationally active companies in the country. An additional 10 percent associate qualitative growth with better education and vocational training for workers. And just under one third of all respondents either cannot or choose not to provide any explanation of the meaning of qualitative growth in response to the openended question (Figure 8). In comparison to respondents on average, a greater share of business leaders who think the government should only promote qualitative growth or should even impose limits on economic activities that are incompatible with qualitative growth criteria refer to "sustainability" when asked to explain the meaning of "qualitative growth." Yet even in this group, about one in seven respondents refers to purely economic criteria and over a third provides no response at all.²

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² Special analysis

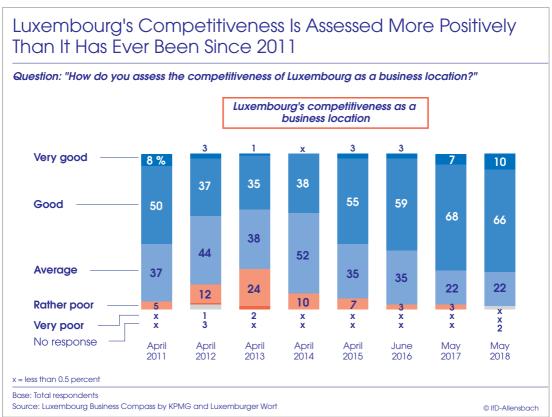
Figure 8

No Clear or Consistent Understanding of "Qualitative Growth" among Business Leaders Question: "In the run-up to the parliamentary elections this autumn, there is a growing debate on the issue of 'qualitative growth' in Luxembourg. What does 'qualitative growth' mean to you?" (Open-ended question, multiple responses possible) Respondents who understand "qualitative growth" in the sense of Sustainable growth, preserving resources Economic improvements, such as higher productivity, more operationally active companies in the country Socially compatible growth Better education and vocational training for workers Negative comments, warnings 4 Other responses No response 14 Base: Total respondents Source: Luxembourg Business Compass by KPMG and Luxemburger Wort (May 2017)

In the view of business leaders, Luxembourg's competitiveness has continued to improve, but the lack of qualified staff is becoming increasingly problematic

When it comes to Luxembourg's competitiveness as a business location, the assessments given by Luxembourg business leaders are currently more positive than they have ever been since this indicator was first ascertained within the framework of the *Luxembourg Business Compass*. Three quarters of top decision-makers now assess the country's competitiveness as either "good" (66 percent) or "very good" (10 percent). Only 22 percent rate the country's competitiveness as "average," while no respondents say it is "rather poor" or "very poor" (Figure 9).

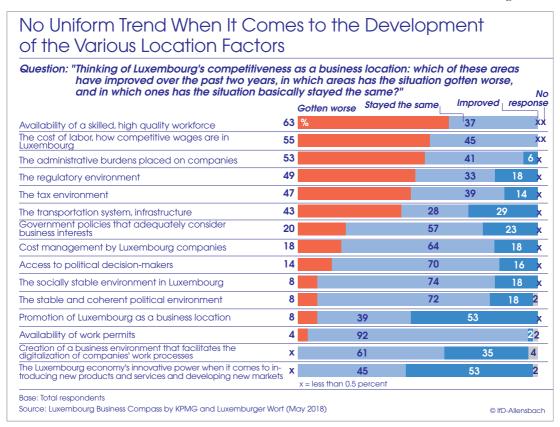
Figure 9



At the same time, however, when it comes to how the various factors that contribute to Luxembourg's competitiveness as a business location have developed over the past two years, Luxembourg business leaders tend to perceive very uneven trends. Thus, assessments of how these areas have developed are clearly negative on balance with respect to the availability of a skilled, high quality workforce, the development of labor costs, the administrative burdens placed on companies, the regulatory environment, tax environment and the infrastructure.

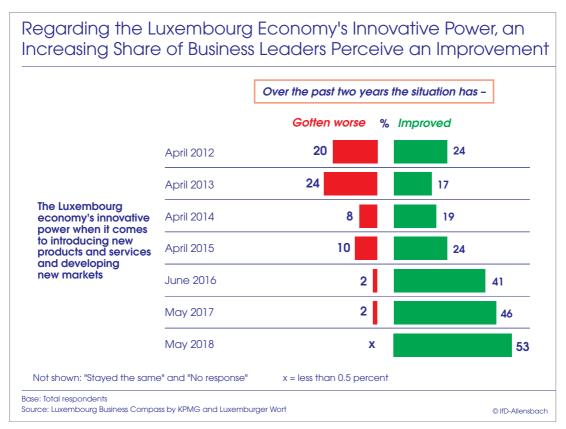
In contrast, top decision-makers perceive a clearly positive trend on balance in connection with the innovative power of the Luxembourg economy, the creation of a business environment that facilitates the digitalization of companies' work processes, along with the promotion of Luxembourg as a business location. The entrepreneurs interviewed also tend to give a more positive than negative assessment with respect to the development of the socially stable environment in Luxembourg and the stable and coherent political environment (Figure 10)

Figure 10



In comparison to previous years, respondents' assessments of the development of various location factors vary greatly. On the one hand, some areas are assessed remarkably positively when compared to the findings obtained in prior survey waves. This is in line with respondents' highly positive assessments of Luxembourg's overall competitiveness as a business location in the current survey wave (see Figure 9 above). Thus, the share of business leaders who perceive a positive trend with respect to the Luxembourg economy's innovative power has grown even more in comparison to prior years (Figure 11).

Figure 11



At the same time, the development of the socially stable environment and the political system in Luxembourg are assessed positively on balance for the first time (Figures 12 and 13).

Figure 12

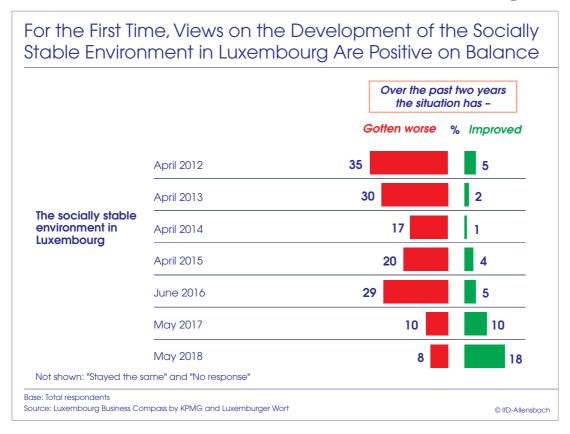
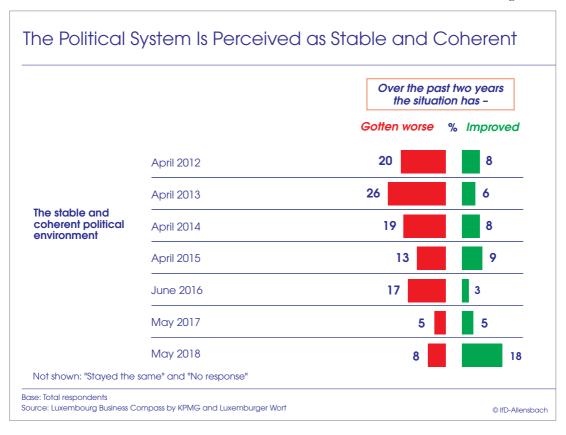


Figure 13



In contrast, the development of the tax environment is again assessed considerably more negatively than it was in the past two years (Figure 14). Moreover, a majority of business leaders generally have the impression that the situation regarding the administrative burdens placed on companies has gotten worse over the past two years (Figure 15).

Figure 14

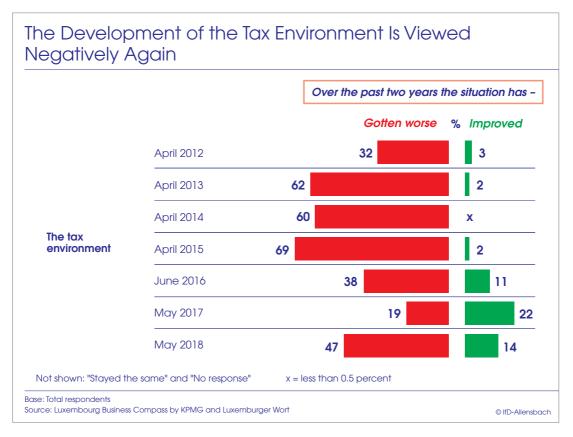
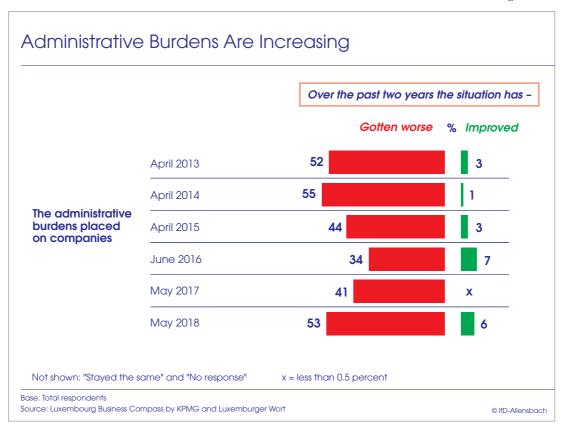


Figure 15



One particularly striking finding obtained in the current survey wave is business leaders' more negative assessment of the trend with respect to labor costs and the labor market: the development of labor costs over the past two years is currently again assessed negatively by more than half of all respondents (Figure 16). When it comes to the availability of a skilled, high quality workforce, almost two thirds of respondents perceive a negative trend, a share that far exceeds the levels ascertained in any prior survey waves (Figure 17).

Figure 16

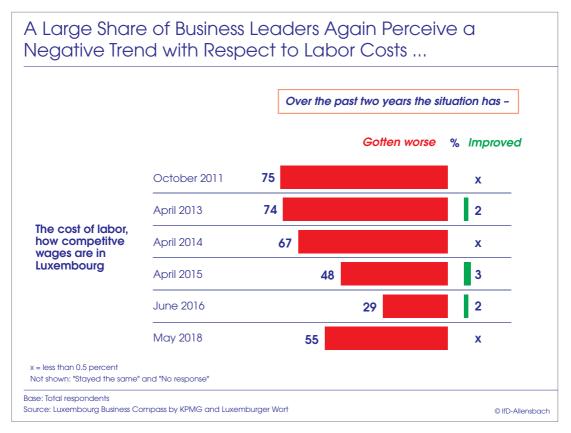
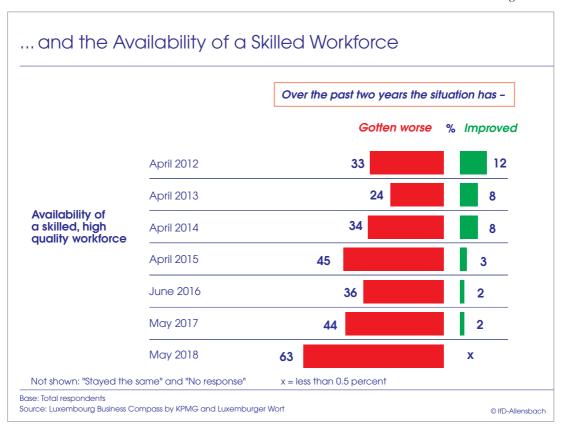


Figure 17



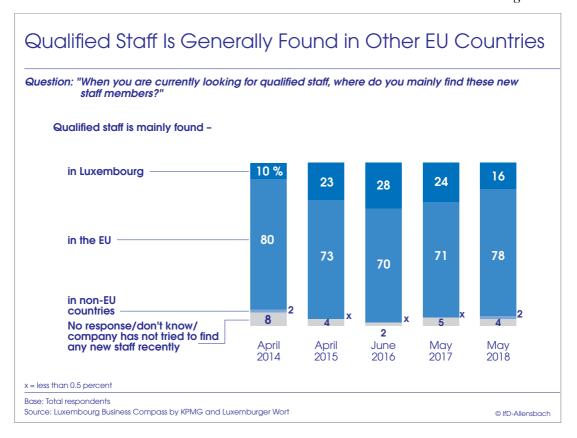
Accordingly, the share of business leaders who report that their companies have major difficulties finding qualified staff is even greater than it was in prior years: only 16 percent of major Luxembourg companies currently say that finding qualified staff is somewhat easy; none of them state that it is very easy. In contrast, 41 percent report that finding qualified staff is somewhat difficult, and the same share of companies even say it is very difficult (Figure 18).

Figure 18



About three quarters of major Luxembourg companies primarily find qualified staff in other EU countries. The share of companies that mainly find qualified staff in Luxembourg is currently 16 percent, which is somewhat lower than the levels ascertained in previous years (Figure 19).

Figure 19



The lack of qualified staff is also by far the most frequently cited factor that top decision-makers believe could impede growth at their own companies over the next 6 months. The leaders of 59 percent of the largest Luxembourg companies expect that the lack of qualified staff will significantly hamper their company's growth over the next 6 months. Trailing far behind are other limiting factors such as legislative and regulatory pressures (41 percent), competition from foreign markets (35 percent, Figure 20).

In comparison to prior years, the lack of qualified staff has again become a considerably more significant barrier to growth at Luxembourg companies (Figure 21). In light of this development, staff turnover is also becoming increasingly problematic for Luxembourg companies. The share of business leaders who view this factor as an important barrier to growth at their own companies is now at 22 percent, which is higher than it has ever been in any prior survey waves (Figure 22).

Figure 20

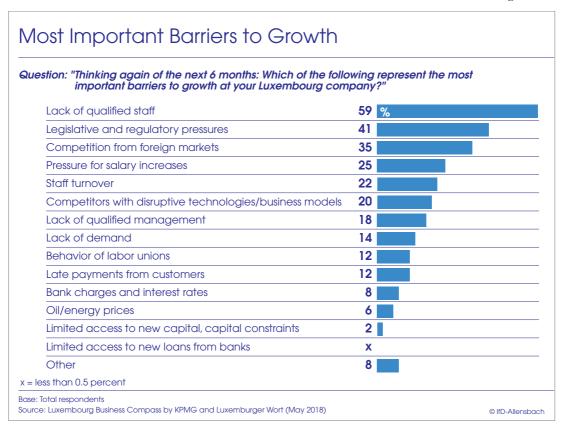


Figure 21

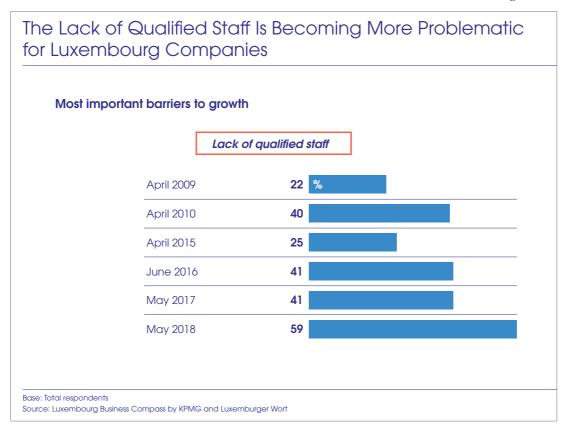
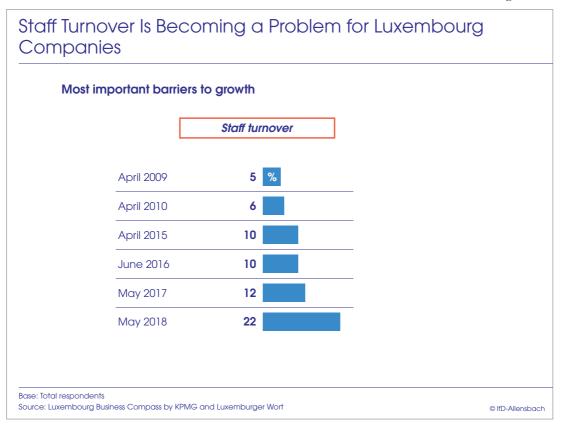


Figure 22



A majority of companies assess their current business situation as good and they continue to anticipate a positive trend in the near future. In comparison to last year, however, their expectations are more subdued

The robust economic trend in Luxembourg and business leaders' unabatedly optimistic outlook regarding the development of the economy in general are also reflected in their positive assessments of the development at their own companies. About two thirds of all respondents currently assess the business situation of their Luxembourg companies as good, while the remaining respondents say it is satisfactory. No respondents currently describe the business situation of their own companies as poor (Figure 23).

Looking back at the past 6 months, about half of the entrepreneurs interviewed report that their companies' business situation has improved, 39 percent perceive no change over this period of time and only 8 percent report that the situation has deteriorated (Figure 24).

A Majority Reports That the Current Business Situation Is Good

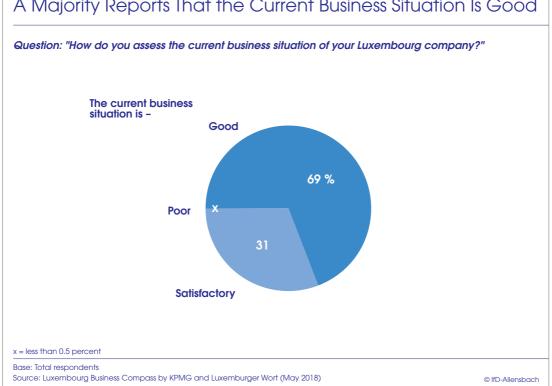
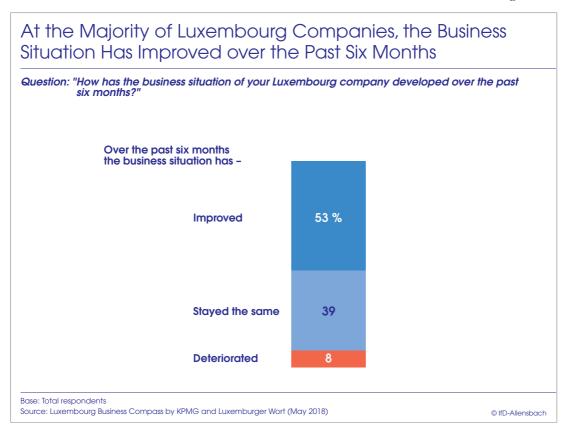
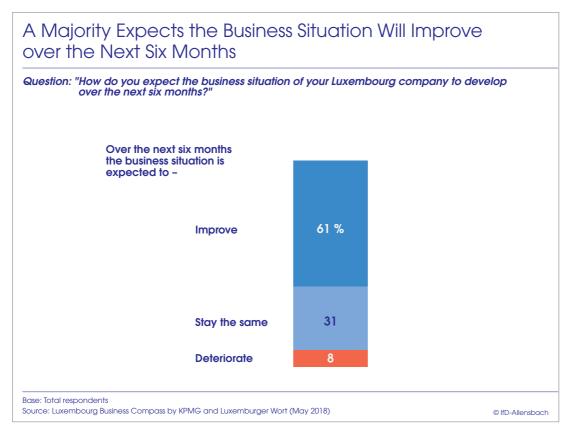


Figure 24



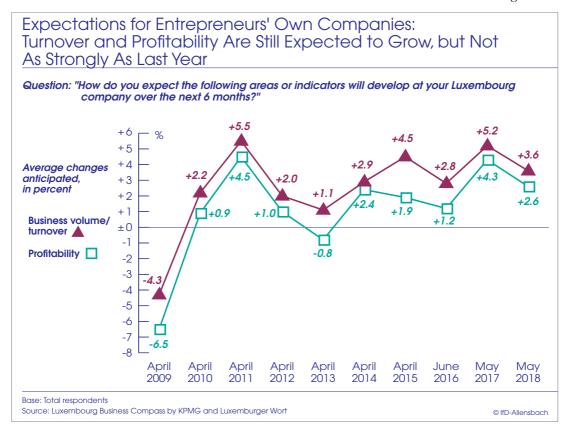
When it comes to the next 6 months, a majority of decision-makers expect that the situation will improve (further): 61 percent expect that the business situation of their Luxembourg companies will improve over this period of time, about one third of business leaders anticipate no change, while only 8 percent expect that the situation will deteriorate (Figure 25).

Figure 25



These assessments are also confirmed by the results of a more differentiated question focusing on the development of key indicators at respondents' own companies. Thus, turnover is expected to increase by an average of 3.6 percent over the next 6 months, while profitability is expected to increase by 2.6 percent. Although these values are clearly lower than the values ascertained last year—thus indicating that entrepreneurs' expectations for the future are currently somewhat more subdued than they were a year ago—they are nevertheless still markedly positive when compared with the findings obtained over the long term (Figure 26).

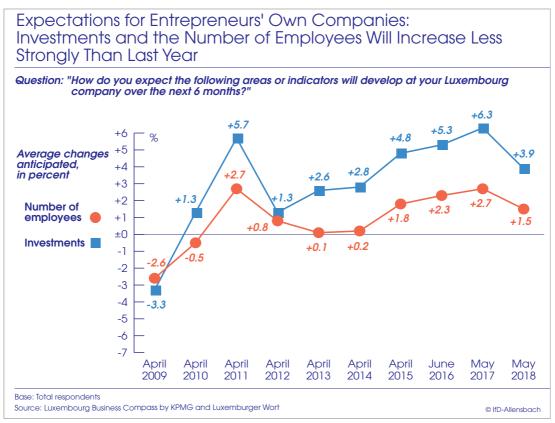
Figure 26



The number of employees is also expected to increase over the next 6 months: specifically, by an average of +1.5 percent. This increase could further exacerbate the situation regarding the market for skilled workers, which is already perceived as problematic.

The investment volume at Luxembourg companies is also expected to increase appreciably—specifically, by an average of +3.9 percent—even though the expected increase is much smaller than the corresponding value ascertained a year ago (Figure 27).

Figure 27



A more differentiated analysis shows that 88 percent of major Luxembourg companies anticipate growing turnover, and about two thirds expect an increase in both investments and the number of employees. An increase in profitability is expected by 57 percent. In each case, only small minorities foresee a downward trend with respect to these indicators (Figure 28).

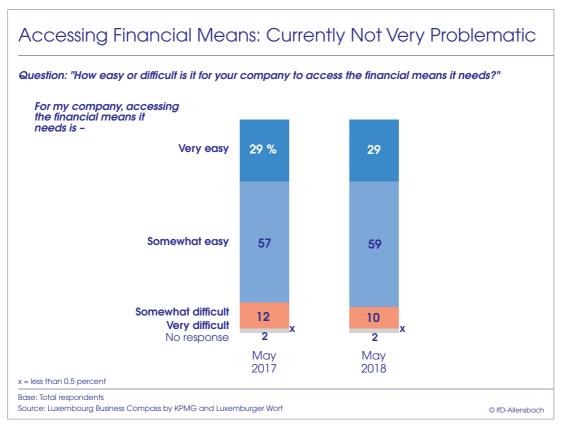
Figure 28

uestion: "How do you expect company over the i			l develop at you	r Luxembourg
	Profitability	Business volume/ turnover	Investments	Number of employees
	%	%	%	%
Increase:	<i>57</i>	88	63	67
+20% or more	2	2	6	2
+10% to less than +20%	2	8	4	X
+5% to less than +10%	22	23	31	18
less than +5%	31	55	22	47
No change	33	2	29	19
Decrease:	10	10	8	14
less than -5%	6	2	4	8
-5% to less than -10%	2	4	X	х
-10% to less than -20%	2	2	2	Х
-20% or more	Х	2	2	6
No response	X	X	X	X
	100	100	100	100
On average	+2.6	+3.6	+3.9	+1.5

As a rule, major Luxembourg companies have no problems accessing the financial means needed to realize their investment plans: 29 percent of business leaders say it is very easy to access the financial means required and an additional 59 percent say it is somewhat easy. Only 10 percent of respondents say accessing such financial means is somewhat difficult, while no respondents say it is very difficult. Accordingly, only few companies cite bank charges and interest rates, along with limited access to bank loans or new capital, as factors that impede growth at their Luxembourg companies.³

In comparison to last year, there has been practically no change regarding the ease with which major Luxembourg companies can access the financial means they need (Figure 29).

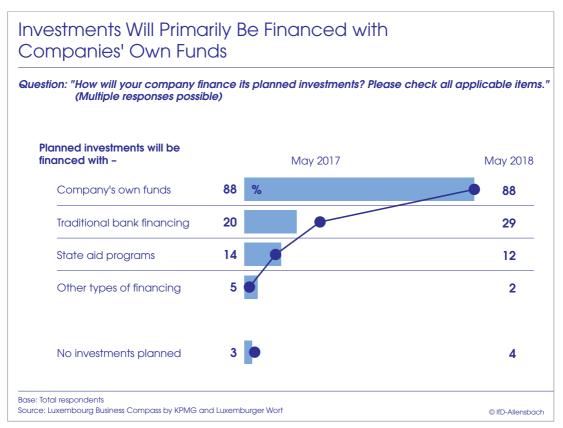
Figure 29



³ See Figure 20, p. 24.

One reason for this could also be that 88 percent of the companies surveyed report that they are (also) planning to finance their investments with their company's own funds, whereas 29 percent will (also) resort to traditional bank financing and 12 percent will make use of state aid programs (Figure 30). If multiple responses are excluded from the calculation, we find that the majority of Luxembourg companies are able to finance their planned investments wholly by means of their own funds (59 percent).⁴

Figure 30



⁴ Special analysis

The majority of companies are planning to expand their budgets for digitalization, introducing new products and services, IT, and for recruiting new staff and training

The largest Luxembourg companies are generally planning to increase rather than reduce their budgets for all areas of operations over the next six months. Particularly large shares anticipate increases in connection with expenditures for digitalization and networking of work processes (76 percent), for introducing new products or services (71 percent), for information technology (69 percent), as well as for recruiting new staff (59 percent) and for training (57 percent). Business leaders are least likely to be planning to increase their budgets for advertising and business acquisitions (Figure 31).

Figure 31

Question: "In which of the following areas w reduce its expenditures in the ne		rg company increas	e or, re	espective	∍ly,	
	Increase	No change _		No re Decreas		on
Digitalization and networking of work processes	s 76 %			22	2	X
Introduction of new products or services	71			29	X	X
Information technology	69			29	2	х
Recruiting new staff	59		33	3	8	х
Training	57		39		22	
Marketing and sales	47		51		2	х
Salaries (excluding legally binding indexation)	41		55		<mark>2</mark> 2	
Research and development	37	63			х	X
Promotion	35	63			2	х
E-commerce	33	67			х	Х
Expanding facilities	29	65			6	Х
Geographic expansion	27	71			X2	
Business acquisitions	18	80			2	Х
Advertising	12	86			2	х
x = less than 0.5 percent						

In comparison with the planned increases measured in previous years, a remarkably high share of companies are planning to increase expenditures for recruiting new staff and for salaries. The increasing budgets in these areas are the logical result of two factors combined: i.e. the lack of qualified staff and plans to increase the number of employees at Luxembourg companies.

The share of companies that intend to increase their budgets for recruiting new staff over the next 6 months is currently at 59 percent, which is larger than it has ever been in any of the prior spring survey waves of the *Luxembourg Business Compass* (Figure 32). At the same time, 41 percent of Luxembourg companies anticipate increasing expenditures for salaries and wages, even when increases due to legally binding indexation are excluded. The value measured thus remains at the same high level that was ascertained last year (Figure 33).

Figure 32

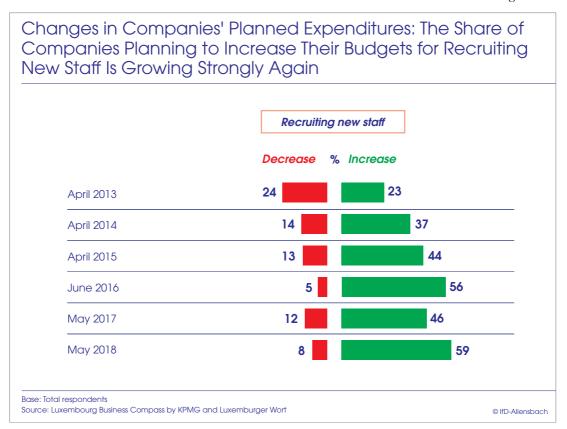
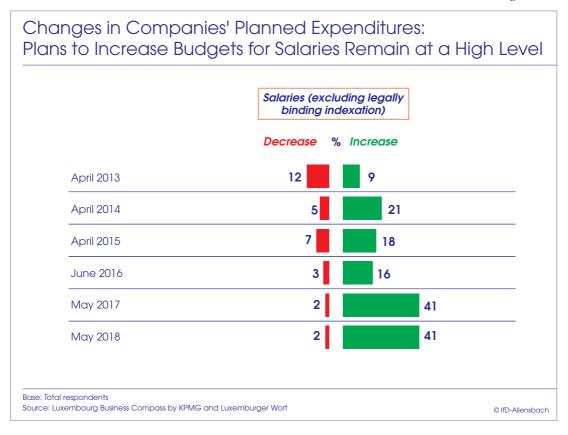
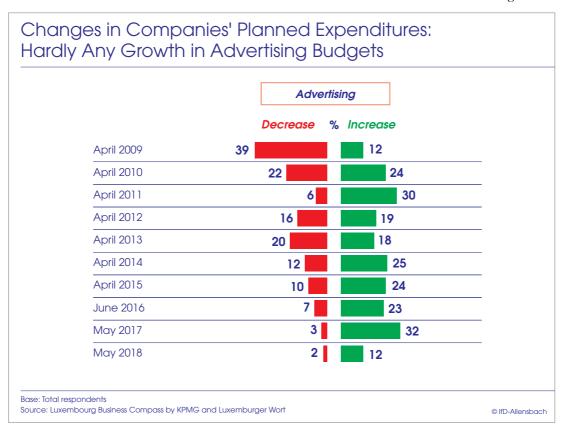


Figure 33



In contrast, the share of companies that are planning to increase their advertising budgets over the next 6 months has declined significantly in comparison to prior years, falling to the lowest level on balance since 2013 (Figure 34).

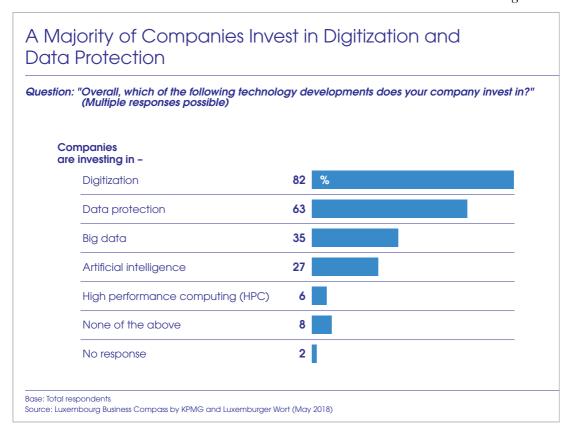
Figure 34



Roughly three quarters of the companies interviewed anticipate increasing budgets for digitalization and networking of work processes in the near future.⁵ A total of 82 percent of major Luxembourg companies are investing in the area of digitization.

A clear majority of companies (63 percent) are also investing in the area of data protection. When it comes to more specific technical developments, the shares measured are smaller: about one third of respondents say their companies are investing in the area of "big data," while about one quarter are investing in artificial intelligence. And only a small share of companies are investing in high performance computing (6 percent, Figure 35).

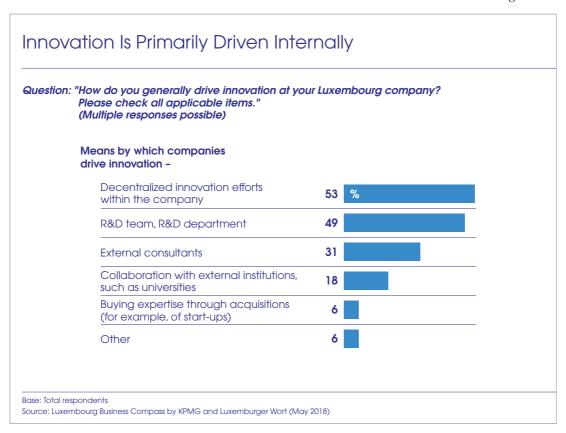
Figure 35



⁵ See Figure 31.

At the companies interviewed, innovation generally tends to be driven internally, rather than by means of external support: a combined total of 84 percent say innovation is driven internally in the form of decentralized innovation efforts within the company (53 percent) or research & development teams and departments (49 percent). In contrast, a total of 43 percent of companies (also) rely on external support, particularly on external consultants (31 percent) as well as collaboration with external institutions such as universities (18 percent). Only a small share of companies drive innovation by means of acquisitions, for example, by buying start-ups (Figure 36).

Figure 36



⁶ Special analyses

APPENDIX
Survey data

SURVEY DATA

Overall respons-

ibility for methods: Institut für Demoskopie Allensbach

Planning and draw-

ing the sample: KPMG Luxemburg

Group of persons

interviewed (universe):

Top decision-makers at the largest companies in Luxembourg, as defined by the number of employees

Sampling method: <u>Top-down approach stratified according to business sectors</u>

The sample was drawn based on the directory(*) of the Luxembourg statistics bureau

(Statec), which lists companies with 90 employees or more in Luxembourg.

For each business sector, the number of companies included in the survey was roughly commensurate with the sector's share of the gross domestic product (GDP) of Luxembourg, whereby the companies were selected in descending order

according to the number of employees.

In the companies selected to participate, every effort was made to persuade a

representative of the upper management (owner, CEO, CFO, COO, etc.) to

complete the online survey.

Number of

respondents: 49

Type of interviews: Online survey completed after prior notification in writing or by telephone

Fieldwork dates: April 16 – May 14, 2018

IfD Archives

Survey No.: 7281

(*) Les principaux employeurs au Luxembourg d'après l'effectif classés par branche d'activité économique de la NACE Rév.2 Situation au 1er janvier 2017 (édition juin 2017)