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11.1 Japan

199. Thank you Madam Chair and colleagues for giving us the opportunity to introduce the summary paper of the 2017 theme on Inclusive Innovation and MSMEs: Collaboration, Growth and Trade (IP/C/W/638), which was prepared by co-sponsors namely Australia; Canada; the European Union; Japan; Singapore; Switzerland; the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu; and the United States. The summary paper highlights some of the examples raised in this council last year and reiterates the value of IP, inclusive innovation and MSMEs.

200. Regarding the MSME Collaboration, it is mentioned that MSME collaboration is multidimensional, and can occur in various ways. In this context, a number of WTO Members provide programs or platforms to stimulate partnerships and other cooperative/collaborative undertakings among a variety of entities, and try to enable MSMEs to more readily engage in innovation collaborations.

201. Regarding the MSME Growth, it is mentioned that MSMEs can achieve sustainable growth by using IP. Based on such an idea, several WTO Members provide means for supporting innovative MSMEs to develop effective IP strategies. Moreover, it is also mentioned that establishing favourable IP conditions has positive effects on local growth potential in middle and low income economies.

202. Regarding the MSME Trade, it is mentioned that IP rights can help create and maintain value added and export opportunities to MSMEs. Therefore, supportive activities for formulating appropriate IP strategies overseas are undertaken by many WTO Members.

203. In addition, at the Friends of IP and Innovation sponsored side-event on the margins of the October meeting, we heard directly from four MSME stakeholders from South Africa, Israel, Indonesia and Colombia on the benefits of IP to promote MSME development. The stakeholder presentations highlighted the importance of IP to MSME growth and the pivotal role that a government can play as a catalyst for the private sector to grow their businesses and take advantage of global opportunities.

204. Overall, discussions held during the three meetings of the TRIPS Council in 2017 provided a robust and thorough overview of WTO Members' national and international IP strategies, both from developing and developed countries. WTO Members provided examples of programs and policies designed to promote inclusive innovation and trade opportunities for MSMEs, as well as examples of MSMEs applying individual IP strategies which enable them to collaborate, grow, and engage in national and international trade.

205. Finally, we would like to add that we are looking forward to continuing our discussion and sharing our experiences this year on the new theme.

11.2 European Union

206. It is a pleasure to introduce the 2018 IP and Innovation overarching theme "The Societal Value of IP in the New Economy". This year we propose that the discussion on IP and Innovation could take a new angle examining how IP helps create conditions that encourage investments in innovations of all kinds, helping to create new businesses and expand opportunities for individuals and societies. IP protection and enforcement can help promote conditions that encourage risk-taking, whether in the development of new technologies, new solutions to business challenges, new cultural and artistic expressions, and the means to distribute such work to the public. The TRIPS Council Members are invited to take part in a three-part exchange this year on how their IP intensive industries continue to be a major and an integral part of their local economies and share
their success stories on how IP improves everyday lives, builds new businesses and contributes to the economic prosperity of our economies.

207. The first subtheme is IP intensive industries and their economic impact on society which we are proposing to discuss today. Future topics will include IP improving lives, and IP and new businesses. And now I would like to hand over the word to Paul Maier, he is the Director of the EU Observatory on Infringements of Intellectual Property Rights in Alicante, to share with us in the name of the EU the presentation of the paper.¹

208. I would like to present a certain number of economic results based on studies which were performed together with a number of other international organisations among which the European Patent Office. The title of the presentation is Intellectual Property Rights Intensive Industries and Economic Performance in the European Union. I will actually try to give you as briefly as possible the results of three different studies which deal with the value of the intellectual property in Europe.

209. The first study is an updated study that we had presented already back in 2013 and that looks at IP intensive industries as such. It tries to determine the value of intellectual property rights in the economy of the European Union. In other words, how trademarks, designs, patents, copyrights, geographical indications and plant and variety rights contribute to employment, GDP, remuneration and trade. This study was published, this second round, in 2016.

210. Then we will look at the second study which goes into the firm level as such and we have made a specific study also of small and medium-sized enterprises to try to determine their approach to intellectual property. Economic study means talking first a little about methodology, because it is vital. If you look at the study that I mention now, you will find an annex of thirteen pages and extensive explanations on the methodology, it is important to try and explain how we did it, these studies are based on what we call serious data crunching. It is not just subdivided to macroeconomic figures and multiplying by some factor, rather the effort was made to go into the filing data of the European Patent Office, our own office where trademarks and designs are registered and the plant variety rights, and we looked at all the filings that we had in our database. Then the idea was to cut this through a commercial database which is the ORBIS database which is a database which includes more than 22 million companies that are obliged to report officially their results. On the basis of this and on the matching of the data between there various databases we have managed to obtain solid data, the most solid that you can actually have.

211. For copyright the situation is a bit different, because for copyright of course there is no registration system, as you well know, so we have based ourselves under WIPO work on the definition of the sectors of industry which are considered to be copyright intensive. When it comes to geographical indications, we took the figures from our colleagues in DG Agriculture which simply mention all the sectors exhaustively that live with geographical indications. Again, if you want to look at the methodology you have the link here directly so look at this.

212. I think it is important to say that these figures are based also, and were compared to macroeconomic studies of Eurostat from the year 2011 to 2013, so the averages cover three entire years to make sure that eventual incredible drops or incredible increases were wiped out. The other element, I would like to say here, is that of course we determine what are the IP intensive industries that those in which the sectors in which more trademarks than average are filed, more patents than average are filed. It is important to say that all sectors of industry and agriculture live with and use intellectual property. IPR is essential in the free market economy. Nobody puts on the market a product that has not a trademark to differentiate it from the competitor, nowadays you would not even buy a product which is not well designed, and therefore design and trademarks are everywhere.

213. You will see that out of the more than 600 sectors of industry as they exist in the NACE Classification which is an international classification, 342 were considered to be IP intensive, for one intellectual property rights or several. What is interesting to see is the huge overlap of intellectual property rights between the various sectors. A number of these sectors are IP intensive in four different areas of intellectual property. There is one which is intensive in GIs, in designs

¹ This PowerPoint presentation is available in Room Document RD/IP/21.
ample. Of course, a number of themanufacturing sectors would be intensive in designs, in patents, trademarks and very often as well in copyright. In other words, intellectual property rights are all-important, they are all needed for industry depending on the type of innovation that we are talking about and the type of marketing strategies that want to be put forward.

214. Let us look now at the results. The results that we found were staggering, 28% of all the jobs in the European Union are directly generated by IPR intensive industries during the period 2011-2013. That is 60 million jobs. In addition, some 10% of these jobs were generated indirectly by the industry that supplies goods and services to the IP intensive industries. So, all in all, we consider that 82 million jobs in the European Union are directly or indirectly generated, safeguarded and made alive by IP intensive industries. As you can see on the right, you have this broken down by type of intellectual property right. From the figure that we saw before you can of course draw the conclusion that if you add this all up, it will be more than the 38%.

215. Trademarks are first intellectual property right in terms of the wideness of its use. In a free market economy if you want to go and be competitive, you have to differentiate your product, therefore most products, if not all of them that go directly to a consumer, bear trademarks. Design is number two and patent is number three, when it comes to the contribution to employment. If you talk about the GDP, the Gross Domestic Product, 42% of total activity is generated by IP intensive industries and there it is interesting to see that actually patents go above designs. In other words, the GDP contribution of patent is higher than the employment in comparison.

216. Contribution of IPR-intensive industries to remuneration. Not only do these sectors contribute, not only are they a huge part of the EU economy, but these sectors also, to a large extent, provide a much better remuneration to the persons who work for them. The average wage premium is by 46%, patent intensive industries being by far the one where the wages are the best and then followed by copyright. In other words, these jobs are not only many, they are also formidably important, they constitute the future of our economy and the well-paid part of it.

217. IP intensive industries contribute to a large extent to the trade balance of the European Union. 86% of what we import in the European Union corresponds to these sectors of industry, but 93% of what we export corresponds to it. And actually the EU, as well known, has a trade deficit, but thanks to the IP intensive industry, this deficit is somewhat alleviated. Until now, I spoke of the European average, without going into detail, of course this study has all the details for each member State of the European Union. I wanted to give you just a brief view of what are the member States that are above the average and the ones that are below. It is important to say that what we look at when we look at employment of IP intensive industries, we look indeed at the entire sector, and there it is interesting to see that Eastern European countries, the newer member States of the European Union do particularly well. We will see that patent filing, design and trademark filing is higher per capita in the other countries in the EU, but the production takes place to a large extent in the newer member States. This is a sign for us that the internal market of the EU functions well. Everybody protects intellectual property well, intellectual property is protected in all the countries, but of course when it comes to production, you would go to lower cost zones and this is what this figure actually shows. The same when it comes to GDP, there are some differences though. The countries are not necessarily the same, but again, the contribution to GDP is higher in average in the Eastern European countries.

218. Who files most trademarks? Who files more designs? Who files most patents? Actually here what you have is a per capita average of patents filed. So number one is Luxembourg, country of around 400,000 inhabitants, of course they are not the number one filer in terms of volume. Actually number one filer in the EU of trademarks is Germany, followed by the United States and number three is China now. Same for designs, again Luxembourg is way in front but in terms of volume; it will not be number one. Number one of course in terms of patents is, in volume, Germany and the United States, by the way.

219. I invite you to look at this, it is a more detailed figure from the one I showed before with the map. It looks at the job creations that can be considered another positive IPR contribution to the EU. If you look at Hungary, close to 40% of the jobs in this country are generated by IPR intensive industry which do not originate in the country. In other words, 40% of the jobs in Hungary are imported, because they correspond to investments to a large extent to IP intensive industries from the EU, that is the dark blue but also other third countries of the EU. And you will
have the entire list going down to the bottom. Again, this shows that the internal market of the EU functions well that where protection is broad is solid in the entire zone, what you will you obtain is a transfer of investment towards lower cost parts of the geographical zone.

220. The second element I would like to talk about is a second study that we have made, while we looked at individual firms, what we have heard so far is the sectors, now we looked at the individual firms that are part of these sectors. There you should know that we have actually looked at individual firms again, we have made sure that every element of the calculations that we made was verified. We started with a sample of more than 2,300,000 companies that are companies that pertain to these sectors. In order to make sure that we have a randomized sample we have cleaned this up, we have made sure that the outliers are taken out, we have made sure that at least 50% of these companies also are companies that indeed have patents, trademarks, and designs. We have checked that individually.

221. On these bases, what are the results? Little more than 10% of these companies are really IP intensive, they are not using only one of the IPs, many times several of them. There you have the figures of the large companies on the right bottom and the small- and medium-sized enterprises, because as you will see in a second, we do focus a lot on small- and medium-sized enterprises. Only 9.1% of small and medium sized enterprises are really using registered intellectual property rights. This may sound small, in fact it is not, you should know that among approximately 21 million companies that are included in the database, you will have local butchers, the pastry shops, these are people who have companies, who are listed, but who do not necessarily invest heavily in innovation.

222. What are the main results by the number of employees? This is based on a randomized sample. In principle non-IP owning companies have an average of 94 employees. This number for companies that use intellectual property jumps to 547. This is considerable, it clearly shows that companies that want to grow, have to have intellectual property rights. There is no demonstration of causality here, causality is almost impossible to demonstrate in economic terms, but the correlation is very solid and difficult to put into question.

223. Let us look at the revenue per employee in the firm. The revenue per employee during the year is on average in the EU is €225,000. That is the revenue of the company per employee, that is not the payment to the employee. This is increased by 28.6% when it comes to companies that use intellectual property rights and even 32% for small and medium-sized enterprises. Again, IP owning companies generate much more, significantly more revenue than those that do not have Intellectual Property registered. Now, if we look at the wages, this is what is payed to the employees. There too, the blue bubble in the middle, 19.8% better pays to the employees for these companies. You always have the breaking down by patent where it is almost 41%, trademarks 19% and designs 23%. Clearly, the figures, going into the detail of the companies that we have in the EU, show that the revenue of the companies and the revenue, the salaries payed to the employees, are significantly higher in IP intensive industries.

224. I will finish now with small and medium sized enterprises and intellectual property. Small and medium sized enterprises correspond to 99% of the companies in the EU and probably something like 96% of the economy of the EU. We wanted to explore if and how innovative SMEs position themselves towards IPR. We wanted to know what the level of awareness is, the relevance of IPR, why some SMEs register or not intellectual property rights, as we saw, only 9.1% have registered IPRs. What types of IPR are used and what are the constraints? In other words, we wanted to understand better the positioning of intellectual property. There we had to proceed by a telephone survey, there you cannot obtain data directly from any database. We interrogated close to 9000 small and medium-sized enterprises all over Europe to try to obtain results and answers to our questions. From those that we have used in the sample, 66% do not use IPR, 34% do. When it comes to the very small SMEs, small and medium ones, there the figures correspond a bit differently.

225. What are the key findings? The majority of small and medium-sized enterprises believe that they are innovative, so entrepreneurs think they are innovative. It is a good thing to know. The level of innovation does not always match their perception though, a bit of optimism. The majority of small and medium sized enterprises are not familiar with intellectual property rights, and this is one of the major challenges that we have to face in the EU Observatory. Now, why would SMEs actually register IPRs? To prevent copying, gaining better legal certainty and increase their value
and image. However, a strong majority of companies that have registered IPR believe that it has had a very positive or positive attitude and impact on their businesses.

226. The usage of Intellectual Property Rights as it is measured in the study. The main problem for small and medium sized enterprises, that do not use IP is that they consider that the cost and the length of procedure is too important, which is why our Intellectual Property Office is making such efforts to make sure that everything can be filed online, that the fees for registrations are as low as possible. And we have lowered the fees for an EU trademark from €2500 back in 1996 to €850 now.

227. Reasons for registering, the five reasons, I mentioned three of them earlier. I would like to finish with the last slide here, which is the perceived impact of registering IPRs. There are three main impacts:

1) increased reputation or image of reliability of the company that is 78%.
2) 58% of the leaders of these companies think that strengthening the long-term business prospects is essential and therefore they need to have IPRs.
3) and in 57% of the cases, these people consider that filing IPRs has directly increased their turnover.

228. These are the links of the three studies that I have mentioned. You can find them in our website together with another 38 studies of economics or legal issues on intellectual property rights in the EU.

11.3 Japan

229. First of all, the delegation of Japan would like to express its sincere appreciation for providing an opportunity to share experiences on Japan's policy tools in order to foster IP-intensive businesses for economic growth.²

230. Just for your information, handouts of the slides of this presentation are available just around the entrances of this room.

Slide 1

231. Firstly, this delegation would like to explain the importance to foster IP-intensive industries. This delegation would like to thank the EU for making a wonderful presentation on the interesting studies. According to the report published by EUIPO and EPO, the IP-intensive industries have potential to generate jobs, tend to provide higher wages, and contribute to economic output. In addition, the bar graph on the right side indicates the correlation between patent rights possession and operating profit on sales in Japan. According to this bar graph, the operating profit on sales of MSMEs without patent rights is merely 1.8 percent, while that of MSMEs possessing patent rights amounts up to 3.5 percent. Therefore, the fact that companies with patent rights achieve good business performance indicates that intellectual property has a positive effect on corporation results.

232. On the other hand, however, as shown in the map on the bottom-left side, in Japan, there is regional imbalance in the ratio of MSMEs which have experience to file patent applications. In light of the aforementioned positive effect of intellectual properties in economic growth, there is potential to further stimulate local economic growth by fostering growth of IP-intensive industries.

233. Therefore, the Japan Patent Office provides various policies, including individual support for new IP businesses in local industries, taking into consideration regional characteristics.

Slide 2

234. In this slide, this delegation would like to introduce the "Business Producers," as one possible approach, in order to promote IP-based businesses.

235. With the commission from the Japan Patent Office, Business Producers are dispatched to several specific regions. They identify potential local needs and seeds, which are the core of

² The representative of Japan made a PowerPoint presentation, available in Room Document RD/IP/22.
innovations and have potential to be further commercialized, through utilizing their local networks and special knowledge or skills about IP management. More specifically, with linking industry seeds with potential local needs, the Business Producers provide various business ideas based on intellectual properties, including, for instance, seeking cooperation for fund-raising, product-development, manufacturing and marketing.

236. Furthermore, through analyzing and publicizing various cases of business activity, including both successful and less successful ones, the Business Producers aim to stabilize their activities in local industries even after their support is finished.

Slide 3

237. Now, this delegation would like to introduce a successful example of the Business Producers. The Start-up Company in this slide is a "seeds-holder" based in Tokai region in Japan, which has newly developed micro-sensing devices for physical movement and placement. This technology, for instance, may be used to remotely monitor various data for infrastructure in real-time, such as oscillation and inclination levels of roads, and is expected to reduce, such as, frequency of necessary roadworks by promptly detecting the damage, and also reduce the cost of maintenance.

238. However, in order for commercialization of its technology, the company lacked knowledge on how to apply its innovation to the actual business activities. Specifically, although the company had to place the products on the road in a certain interval to each other and conduct demonstrative experiment or big-data analysis, the company had difficulty in finding the regional partner that could provide experimental fields, and also lacked knowledge in coordination with various parties, such as road maintenance companies.

239. A Business Producer supported the company in consulting with a city government and a road maintenance company that had needs in such experimental activity, and as a result of the consultation, the company was able to carry out the experiment. Additionally, the Business Producer also supported the company in finding potential business partners that would be interested in using its innovations. Consequently, a drone manufacturing company decided to apply the sensing devices, i.e. seeds innovated by the Start-up company. This "seeds-holder" successfully commercialized the products also to construction companies and university laboratories.

Slide 4

240. As seen above, since there is potential for local industries to enhance their growth by developing new IP-based businesses, this delegation believes that one possible approach may be to individually support local industries through the "Business Producers," linking industry seeds with potential local needs.

241. This delegation looks forward to hearing about unique experiences of interesting information under this topic from other delegations.

11.4 United States of America

242. I would like to start by thanking Australia, Canada, the European Union, Japan, Switzerland, and Chinese Taipei for co-sponsoring this theme for 2017 and or all of the delegations that took the time to prepare interventions on it throughout last year. I would additionally like to thank Japan for the presentation summarizing work under last year's theme, to the EU for introducing this year's theme and to both of them for their very comprehensive interventions today. We look forward to continuing helpful exchanges under the 2018 IP and Innovation theme as well.

243. The United States welcomes this opportunity to make its first presentation under the new IP and Innovation theme of Societal Value of IP in the New Economy.

244. We turn our attention to empirical data and present studies on the economic impact of IP or IPR-intensive industries to employment, GDP, and trade.
245. Patents, trademarks, and copyrights are the principal means for establishing ownership rights to inventions and ideas, and provide a legal foundation by which intangible ideas and creations generate tangible benefits to businesses and employees.

246. Intellectual property protection affects commerce throughout the economy by: providing incentives to invent and create; protecting innovators from unauthorized copying; facilitating vertical specialization in technology markets; creating a platform for financial investments in innovation; supporting start-up liquidity and growth through mergers, acquisitions, and IPOs; making licensing-based technology business models possible; and, enabling a more efficient market for technology transfer and trading in technology and ideas. On September 26, 2016, the US Commerce Department released a comprehensive report entitled "Intellectual Property and the US Economy: 2016 Update," which found that IP-intensive industries support at least 45 million U.S. jobs and contribute more than $6 trillion to, or 38.2% of, US gross domestic product (GDP). The report explains that IP incentivizes the creation of new goods and services by conferring exclusive rights to their creators.

247. While inventions typically are a product of ingenious endeavours that require long, persistent, and meticulous effort, subsequent duplication and use of such innovations are often less costly.

248. Patents add to the incentive that inventors have to invest in costly research and development (R&D) by providing the opportunity to reap the rewards of their innovations. In the words of Abraham Lincoln, the patent system "added the fuel of interest to the fire of genius in the discovery and production of new and useful things."

249. Similarly, copyrights provide the framework that incentivizes authors to create literary, artistic, musical, dramatic, cinematic, and other works by granting them the exclusive right to engage in the activities that derive economic benefits from their work. Thus, patents and copyrights serve as tools to stimulate individual, firm, and industry level entrepreneurial ventures that feed into economic activities nationwide.

250. To further exploit the potential of their competitive advantage, producers need effective ways to indicate to consumers the reliability of their products’ source. A trademark "makes effective competition possible in a complex, impersonal marketplace by providing a means through which the consumer can identify products which please him or her and reward the producer with continued patronage."

251. The Report examined 313 industries and identified 81 as those using patent, copyright, or trademark protections most extensively.

252. Some of the most IP-intensive industries include: software publishers, sound recording industries, audio and video equipment manufacturing, cable and other subscription programming, performing arts companies, and radio and television broadcasting.

253. I'll now summarize the findings of the report as to the effects of these industries on employment, gross domestic product, and trade. The Report indicates the critical role that IP-intensive industries play by each measure in the United States.

254. Starting with employment, the study found these "IP-intensive industries" to be the source - directly or indirectly - of 45 million jobs, or roughly 30% of all the jobs in the United States in 2014.

255. Breaking the data down more finely, the report indicates that IP-intensive industries directly accounted for 27.9 million jobs either on their payrolls or under contract in 2014, they also indirectly supported 17.6 million more in supply chain jobs throughout the economy.

256. Examining the data by type of intellectual property, the report found that Trademark-intensive industries are both the largest in number and that they contribute the most employment with 23.7 million jobs in 2014.
Copyright-intensive industries supplied 5.6 million jobs followed by patent-intensive industries with 3.9 million jobs. Similarly to the results found in the EU study, not only is the number of jobs attributable to IP-intensive industries high, but so too is the quality of those jobs.

Examining average weekly wages, workers in IP-intensive industries earned 46% higher than workers in other industries in 2014. That wage premium was even higher for patent-intensive industries – at 74% – and highest in IP-intensive copyright industries – at 90% – in 2014.

Turning to Gross Domestic Product, the share of total US GDP attributable to IP-intensive industries reached 38.2% in 2014. And in terms of absolute value added by IP-intensive industries, the 2014 total was 30% higher than just four years before.

28 of the 81 industries under study derived revenues from IP licensing, in the amount of $115.2 billion in 2012.

In terms of trade, IP-intensive industries accounted for over half the share of U.S. merchandise exports in 2014. In absolute terms, the total merchandise exports of IP-intensive industries increased to $842 billion in 2014.

Exports of service-providing IP-intensive industries totalled about $81 billion in 2012 and accounted for approximately 12.3% of total US private services exported in 2012.

In conclusion, the 2016 update confirmed the critical beneficial contributions of IP-intensive industries to the United States in terms of employment, GDP, and trade.

An economy that is prosperous and growing may provide increasing opportunities for its citizens to find good paying jobs, be rewarded for their hard work, and to offer a brighter future to their children. And innovation offers the opportunity to address challenges and share creative works and other products with an expanding audience.

In the United States, IP intensive industries contribute to a prosperous and growing economy, and thus to the attendant benefits for citizens, as described today.

**11.5 Switzerland**

I would like to thank the previous speakers for their interventions and interesting presentations. We welcome the opportunity to exchange experiences and views on IP-intensive industries and their economic impact on society. We hope to add some further aspects of this issue to the discussion.

"IP-intensive industries" can be defined as branches of economic or commercial activity that use intellectual property rights more intensively than the average industry. They may for example use more patents, trademarks or designs when compared to other industries using IPRs, or generate most of their revenue from licensing IP rights.

For the purposes of our discussion, IP-intensive industries should be understood in broad terms. They should certainly not be limited to cutting edge technology-producing industries or companies. In Switzerland, many of the major economic sectors are IP-intensive industries, which include the three most important export industries: the chemical and pharmaceutical industry, the mechanical and electrical engineering industry, and the watch industry. The number of IP-intensive industries has increased over recent decades. This has ultimately led to higher economic welfare, as IP-intensive industries tend to be more export-oriented and have increased productivity; they pay higher wages and generate more jobs.

Today, we are witnessing an ongoing digital revolution that affects the highly competitive sectors which use IP intensively. The digital revolution is not much different from the industrial revolution in the 19th century, yet there are indeed differences in the dimension, the pace and the level of complexity. The 4th industrial revolution, known also as the digital revolution, is a global rather than a local phenomenon. It is thus a much more trade-related issue, affecting the whole world. The technologies of the impending industrial revolution should enable everyone to access new business opportunities, which benefit the national and international economies, and the challenges to public interest.
**What is the role of the IP-System?**

270. New approaches and solutions have been significantly facilitated by the IP system and the incentives it offers for investment in creative ideas, innovation, research and development of new products and services. An adequate protection and enforcement of intellectual property rights brings forth new businesses, in particular, but not limited to new businesses in high technology industries; it helps and advances our societies, and it contributes to long-term economic growth and development.

**What role does the Swiss government play in supporting IP-intensive industries and thereby fostering innovation and growth?**

271. Switzerland aims to provide and maintain an attractive political and economic framework for businesses and researchers. Within this framework, economic operators, individuals and companies, should be free to pursue their ideas. Government agencies can play an important role in helping businesses and researchers to connect and in providing advice. In the area of IP, the Swiss approach is to motivate businesses to create appropriate IP-strategies which always take into account their individual business models.

272. The following are some successful governmental programmes and projects that support IPR-intensive industries in Switzerland. They reflect the value that the government attributes to branches that heavily rely on IP.

273. The Swiss Federal Institute of Intellectual Property, the Swiss IP Office IPI, has established some measures tailored to the special needs of SMEs, start-ups and inventors. The measures mainly focus on raising awareness of IP, the opportunities it brings and the challenges companies need to be vigilant about. The Institute offers so-called "patent searches". During a half-day assisted patent search, IPI experts provide firms and inventors with information on protection possibilities, their pros and cons, explain the different application procedures, search together with the clients in patent databases and provide them with an initial overview of the state of the art. Firms and inventors previously in touch with the IPI, benefit further from a free initial consultation from some patent attorneys. The IPI also designed a website-portal that is specially geared to the needs of SMEs, showing them how to avoid infringing others' products and protect their own innovations and creative work. Moreover, the Institute has a "Contact Center" working as a centralised point of entry for companies seeking information about IP. Finally, the IPI offers a broad range of IP-courses for firms and interest groups.

274. With the availability of new technologies, counterfeiting is reaching alarming proportions; among other industries, in the watch and health sectors. The problem of counterfeiting can threaten existing jobs, harm the environment. Counterfeiting activities often finance criminal organisations and – in particular relation to drugs and replacement parts – it endangers the health and lives of people. According to the Swiss watch industry's association, sales of counterfeited products are worth an estimated 400 billion dollars annually. Tens of millions of fake Swiss watches are offered for sale every year, while the Swiss watch industry produces around 30 million original watches. To fight against counterfeiting and piracy at the national level, Switzerland has adopted a range of measures. The Swiss Anti-Counterfeiting and Piracy platform, called STOP PIRACY, constitutes such an instrument. It allows for enhanced coordination and cooperation among competent government agencies as well as between the public and private sectors. It acts as a networking platform and provides educational and awareness campaigns to consumers. STOP PIRACY helps IP-intensive industries to persist, grow and add value by supplying the society with innovative, cutting-edge and high quality products and services.

275. A major programme at government level is Innosuisse, the Swiss Innovation Agency. Its role as a federal entity is to support and promote innovating projects in Switzerland. Innosuisse promotes the partnership between academia and the market via innovation projects. It provides networking, training and coaching for innovative firms. Experienced business coaches advise and support start-ups and those interested in setting up a business, providing them the ability to implement their own strategy for growth. Innosuisse also has the task of giving an overview of the innovation landscapes’ numerous public and private stakeholders, and is funding R&D-projects.

276. The three examples of governmental programmes and projects show the public sector's strong engagement in the fostering of IP-intensive and innovative industries.
277. Let me illustrate the economic impact of IP-intensive industries on society with a case example from a traditional industrial sector, which also wrote industrial history in Switzerland. The Federation of the Swiss Watch Industry, FH, is the Swiss watch industry’s leading private, professional and non-profit association with headquarters in Bienne, Switzerland. The FH currently represents around 500 members, which represents more than 90% of Swiss firms active in the production and sale of watches. The association aims to support the Swiss watch industry and to represent the watch sector as a whole in Switzerland and internationally. The watchmaking industry is one of the sectors in Switzerland which has a broad IP portfolio, and it is considered to be the country’s third largest exporter, behind the chemical and pharmaceutical industry, and the machine and electrical engineering industry. Switzerland is the largest exporter of watches in terms of value.

278. In 2015, around 59,000 people in Switzerland were employed in this sector, generating 1.5% of the country’s gross domestic product. According to the FH, the workforce in the watchmaking and micro-engineering sector has risen by a third in the last few years, representing nearly 20,000 additional jobs. This industry still has a significant market potential, despite the fact that Swiss watches have a long history and consist of a mechanical construction. Traditionally made products can indeed endure in the ongoing digital revolution. This is perceived as an opportunity, in particular for peripheral regions such as Bienne. With its 55,000 inhabitants, Bienne serves as the headquarters of numerous watchmaking factories, among others the Swatch Group.

279. Other cities well-known for their watchmaking factories, apart from Geneva, are La Chaux de-Fonds, Neuchâtel or Schaffhausen. All their traditional manufacturing enterprises rely heavily upon the protection of their intellectual property. They protect their innovations with patents, successfully manage and maintain valuable trademarks and designs, and are able to count on copyright protection. Another important IP right for Swiss watch makers are geographical indications.

280. Thanks to all those IP rights, the watch making enterprises can constantly reinvest and create added value, keeping abreast of stiff market competition and significantly contributing to the prosperity of their places of business. The watchmaking industry was also able to recover from difficult times and to overcome structural and economic crises, e.g. in the 1970’s. This was due not least to their innovative spirit, the incentives provided by IP rights, and some other favourable economic framework conditions. Just like other IP-intensive industries, the watchmaking industry constitutes an essential pillar of the local economy, society and culture.

281. We hope that the examples presented have provided Members a brief and useful overview of some of the measures taken by Switzerland to support IP-intensive industries, and an overview of the benefit that those industries provide to their place of business, region, and to the society as a whole.

282. In conclusion it can be noted that IP-intensive industries serve an important function in the international community. Innovation, creative processes, research and development of new technologies - in short the investment into new and better products and services - creates opportunities, but at the same time requires a solid IPR regime and protection. We look forward to hearing the contributions of other Members. We will also be interested in learning more about aspects of New Economy in the upcoming Council meetings this year.

11.6 Norway

283. Norway would like to thank the proponents for the communication contained in document IP/C/W/641, and for interesting presentations and interventions. An examination of the societal value of IP in the new economy, including how IP helps create conditions that encourage investments, should give Members relevant information on the positive contribution of IPRs to the prosperity of individual businesses as well as to the economy at large.

284. The Norwegian Government is currently undertaking several studies in this area in order to refine our policies. And today I would like to mention two examples:
• A study on the value of IP both at the business level (micro) and the level of society (macro), where we can see that it is methodologically more challenging to measure effects at the macro.
• An external review of all our Government policies in the area of industrial rights.

285. These and other initiatives are a follow-up to the Government's white paper (Report No. 27 to the Storting) on industrial policy, which was issued in March 2017: A Greener, Smarter, and more Innovative Industry.

286. These studies are still a work in progress, but we hope to be able to come back to the Council with concrete findings and examples later this year. We look forward to the discussion.

11.7 Chinese Taipei

287. The Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu is pleased to co-sponsor the two papers under this agenda item. We thank the introductory remarks made by Japan and the EU, as well as all the informative interventions before me. My delegation views this is a useful forum for Members to share experiences on the value of IP.

288. On the 2018 theme: As I’m sure we are all finding, in this era of the digital economy, IP investment is playing an increasingly greater role in driving both economic growth and structural change. And at the same time, innovation is fast becoming a critical factor in the competitiveness of global businesses.

289. Our own economy is certainly no exception. In 2016, IP investment reached a total of US$25.6 billion, which accounted for 4.42% of our GDP.

290. If we break that down by the two main industry sectors, the manufacturing industry, comprising mostly of IT industries, took up close to 62% of the investment. Service industries took up the other 38%.

291. As far as numbers of patent applications are concerned, according to the USPTO's data, in 2015 we ranked 5th in the world, with 11,693 granted inventions. In terms of patent strength, we ranked No. 6. The main technical fields to which these inventions apply are, firstly IT optoelectronics, then mechanical transport, and finally materials chemistry, all of which are indicative of our strong innovation capacity. These types of IP investment are our main sources of expansion in overall demand, and in driving productivity growth.

292. However, despite this strong innovation capacity, we are still failing to generate higher economic values overall because of our continuing high technology trade deficit over recent years. This is vividly illustrated by the fact that the effective use of inventions by universities and research institutes remains at a mere 12%. So, these are the real priority issues that our government has to address.

293. We look forward to hearing from other Members' about their experiences, and how they are dealing with these priority issues in particular.

11.8 Colombia

294. I would like to share Colombia's experience with you in this area. The National Copyright Directorate of Colombia together with the World Intellectual Property Organization WIPO conducted a study on "The Economic Contribution of Copyright-Based Industries in Colombia." The purpose of the study was to quantify the economic contribution of copyright-based industries (CBIs) to value added, foreign trade in exports and imports and employment in Colombia during the period 2000-2005.

295. Based on the methodology proposed by WIPO, the study focused on identifying copyright-based industries and quantifying their contribution to value added, employment and the external sector. These industries include companies contributing to the production and marketing of works protected by copyright at different points in the value chain. They can be grouped into four categories:
a. **Core copyright industries**: This group brings together all industries wholly dedicated to the creation, production, representation, exhibition, communication, distribution and sale of copyright protected material, for example music, literature, theatrical productions, film, communication media, visual arts, advertising services and collective management societies.

b. **Interdependent copyright industries**: These are industries that contribute to the production, manufacture and sale of equipment. Their purpose is to facilitate the creation, production and use of copyright protected material, for example the manufacturing and sale of appliances such as televisions, CD recorders and computers, musical instruments and photographic equipment.

c. **Partial copyright industries**: These involve certain activities that are related or linked to copyright protected materials, such as jewellery, architecture and handicrafts.

d. **Supporting Industries**: This category relies indirectly and marginally on copyright protected material, as the industries in this group also deal with other types of activity unrelated to copyright such as telephony, transport and sales in general.

296. Now on the contribution of the CBIs to value added. The total gross value added of copyright-based industries in Colombia was COP 9.5 trillion, approximately US$4.8 billion in 2005. And COP 5.7 trillion in 2000, each figure representing some 3.3% of GDP. In other words, discounting price increases, the gross value added of the CBIs grew from COP 2.4 trillion in 2000 to COP 3.1 trillion in 2005 (in constant 1994 pesos).

297. During the period analysed, these industries saw an average share of GDP of 3.3%, a rate similar to the share of electricity and gas, slightly higher than the contribution of crude oil and natural gas and more than double that of coffee and coal. The latter comparison is significant in a country with a substantial global market share in these two products.

298. The core industries represent 55.9% of the total value added generated by these economic activities, followed by interdependent industries 23.7%, supporting industries with 12.7% and then partial copyright industries with 7.6%.

299. With regard to the contribution of CBIs to employment. In 2006, copyright-based industries generated 1,097,430 jobs representing 5.8% of the country's workforce and 12.7% of employment in the 13 major cities. This gave these industries a higher share in national employment than traditional sectors such as construction, coffee and finance.

300. Breaking down the contribution of CBIs for that year, the core industries accounted for 1.7% of national employment, the interdependent industries 0.7%, the partial copyright industries 1.9% and the support industries 1.5%.

301. Between 2003 and 2006, the copyright-based industries created around 156,000 additional jobs, representing 8.8% of new jobs throughout the country and 16.5% of those created in the 13 major cities and their metropolitan areas.

302. With regard to the contribution to the external trade. In 2005, CBI exports were worth US$2.138 million, while imports amounted to US$4.8 billion, the net balance showing that imports more than doubled exports while copyright exports represented 17.3% of the country’s industrial exports and 10% of total exports, imports had a more substantial share with 24% and 22.6% respectively.

303. This initial result indicates that in 2005 the country was a net importer of copyright material with $2.662 million. However, the result is mainly determined by imports of the interdependent industries. If the group of core industries alone had been taken into account, the balance would have been reversed, that is, the country would have been a net exporter of copyright material.

304. The purpose of quantifying the economic contribution of copyright industries to value added, national employment and foreign exchange earnings was to make these industries "visible" to the public and to potential investors and financiers (the public sector, firms and private investors). From the public policy point of view, this study was designed to guide specific measures to promote the consolidation and expansion of the CBIs. In other words, it aimed to highlight the fact...
that, beyond their role in the cultural heritage framework, these industries constitute a potential source of economic growth and development.

305. Copyright-based industries in Colombia have extensive production of their own and are characterized by their heterogeneity and different levels of development. They include dynamic sectors associated with information and communication technology, which will not only open new fields of application for copyright and related rights but will also generate new investment to raise CBI participation in the economy in the immediate future. Nonetheless, the expansion of these sectors will not necessarily mean increased GDP or employment in copyright-based industries, at least in the short term.

306. In coming years, the CBIs will, in line with global trends, benefit from greater private investment and will increase their productivity and competitiveness, as long as the investment climate is sound, which depends on copyright and related rights being protected.

11.9 El Salvador

307. We appreciate the inclusion of this item in the agenda, as requested by the delegations of the United States, Japan, Switzerland, the European Union and Chinese Taipei, as well as the summary presented by the delegation of Japan on the important discussions held over the past year on "inclusive innovation and micro, small and medium enterprises (MSMEs): collaboration, growth and trade".

308. We would like to share some ideas on this point, particularly taking into account "the social value of Intellectual Property in the new economy", the theme proposed for this year.

309. The Central American Region has now a valuable instrument. The first phase of an economic study on the impact of the Use of Intellectual Property in Central America and the Dominican Republic was completed in August last year and is an element of guidance for the design and implementation of appropriate measures. The conduct of this study represented a significant effort on the part of the competent authorities in the seven countries of the region and its results are still of a preliminary nature.

310. The main objectives of the Study were to support the formulation of IP policies in the Central American region based on empirical data, as well as to cover the specific technical need for the development of economic and statistical instruments for continuous monitoring and evaluation of the impact of IP, innovation and trade policies in general and, in particular, the recently formulated national policies and strategies on IP. According to this Study, which has linked the trade and IP industrial property registers' data:

- The majority of patents in the region have been requested by foreigners (95%), especially from the US (50%). The inventors of the region have made limited use of the patent system. The few times they have resorted to this system, they have sought protection in their own country or outside the region (mainly in the United States), but very rarely in other countries of the region.
- Utility models have served as an alternative for the inventors of the region, who have submitted 61% of applications. However, in 85% of cases, protection has been limited to the national level, being hardly used at regional and international level.
- Foreigners have been the main users of industrial design protection in the region (81%). However, they have resorted to it to a much lesser extent than in the case of patents.
- Trademarks are the IPR mostly used in the region, in which use by nationals (42%) is similar to the use by foreigners (51%). The United States is the main user of registered trademarks in the region (33%). The region (excluding national use) is the second most important foreign origin of registered trademarks in the region (12%). On the contrary, the region makes little use of trademark protection in the United States (less than 2%). Of the marks that originate in the region, the proportion of those for which protection is requested in the United States with respect to those for which protection is requested in the region (excluding national ones) is from 1 to 9 (that is, less than 10%).
311. One of the main conclusions of the Study is that there is potential in the region for the formulation of policies that stimulate a better use of the IP system in support of commercial strategies.

312. In addition to the integrated data for the region, the study has a chapter of individual data and statistics for each of the seven countries.

313. Amongst other challenges, it was possible to detect a gap in the production of copyright data that allows us to measure the impact of the use of intellectual property, as well as other support measures, in the promotion of the creative industries. As a country and at the regional level, we have begun work to strengthen our institutions and to meet this need, in order to implement consistent and comprehensive policies and measures. We hope to count on an extension of the Study with global Intellectual Property data.

314. At the national level, as mentioned on previous occasions before this Council, we have a National Intellectual Property Policy.

315. I quote the initial paragraph of the policy: "In a vision of inclusive development, the greatest wealth of the country and the most important potential of the Salvadoran nation is in its people, the aforementioned raises the commitment to raise the quality of life of the Salvadoran population and overcome poverty in the route to good living. The future and the progress of the country are directly linked to the capacities and talents of people, to the development of their imagination and creativity, their entrepreneurial quality, their innovative skills, their ability to create knowledge and increase the productivity of their work."

316. Since its adoption in November 2014, one of the great challenges for its implementation has been to integrate intellectual property elements systematically and transversally in the development policies of the country’s social and economic sectors as an instrument with social impact.

317. In addition to the aforementioned programs and actions and others developed by the Intellectual Property Office and the Ministry of Economy, to which our delegation has referred on previous occasions as part of this agenda item, the national export promotion agency PROESA is working jointly with the Intellectual Property Office to support exporters with strategies that involve elements of intellectual property.

318. Our Government is supporting the development of creative industries, especially in the area of application development and videogames. In this sense, the Ministry of Economy has developed sectoral programs to support these industries.

11.10 Australia

319. Australia is pleased to co-sponsor discussions on intellectual property and innovation understanding that these frameworks can play a role in trade, investment and business confidence and development.

320. Under the topic of The Societal Value of Intellectual Property in the New Economy, we will take this opportunity to share our national experience on how balanced and effective intellectual property frameworks can contribute to business development, creative endeavour and employment under this meeting’s topic of Intellectual Property Intensive Industries and their Economic Impact on Society.

321. Rather than focus on large studies and statistics, we will highlight a couple of specific examples. The first is a copyright related example and the second is an example of regional, technical cooperation regarding intellectual property valuation.

322. The rapid growth of the internet and advancements in technology has created both positive and negative effects for copyright intensive industries and its consumers.
323. Advancements mean that it has become easier to enjoy lawful content online. Australians are embracing online streaming services more than before, according to a copyright consumer survey conducted in 2017.

324. Of those surveyed, the number of Australians paying for streamed content has increased by almost 10% overall since 2015. Pricing and availability continue to be key factors for people when accessing copyright material online.

325. Recognising the importance of protecting copyright material from infringement online, in June 2015 Australia introduced a website blocking scheme for copyright owners and internet service providers to work together to disrupt large scale online copyright infringement.

326. The Australian Federal Court has ordered blocking of infringing video streaming, torrent and other websites hosting film, television and music.

327. Research shows a correlation between the introduction of the website blocking scheme and a reduction in online copyright infringement. Australia is monitoring evidence closely to better understand the impact of the scheme over time.

328. Secondly, under the WIPO-Australia Funds in Trust development assistance program. Australia funded a program for universities and research institutions in Indonesia to better understand the full cycle of intellectual property commercialisation.

329. For example, Australia supported a national training workshop on intellectual property in Jakarta in July 2017 to assist technology managers with valuing intellectual property and technologies. This has been a positive example of technical cooperation within the Indo-Pacific region.

11.11 Brazil

330. Brazil thanks the sponsors of the present agenda item. We have submitted to our capital the document IP/C/W/641, circulated on February 21st. As initial comments, let me stress that Brazil continuously strives to provide an environment conducive to innovation and we appreciate opportunities for the exchange of views and experiences that enable mutual understanding. Our first innovation law was approved back in 2004 and during its drafting we carefully studied the legal framework of other countries and their concrete results achieved. As recent as February 7th, a new decree was approved with additional initiatives to encourage innovation and scientific and technological research in Brazilian universities. We hope to come back with further comments in the next session of the Council.

331. The dynamics of intellectual property protection in a market economy and their role in relation to creativity and innovation provide the background to this discussion. In our view, this implies that a well-crafted and balanced IP system is able to stimulate innovation while addressing the potential anticompetitive effects, avoiding that IP themselves become a barrier to access to technology and dissemination of information. It is thus important to deepen understanding of features of the intellectual property system related to the achievement of the objective set in Article 7 of the TRIPS Agreement.

332. I would also add the importance that industrial property offices issue patents of high quality that enhance legal certainty and provide clear boundaries of the rights granted. Patents of low quality can represent an additional barrier to entrepreneurs, in special to MSMEs.

333. In this sense, public databases containing information on the legal status of patents would further help companies to determine the freedom to operate, and to what extent and with whom, licences need to be negotiated. They would also be able to access the vast amount of information contained in patent applications, thereby assisting their efforts to innovate and creating opportunities for further cooperation.
11.12 Canada

334. Canada is pleased to present some of its analysis and findings on the role of IP-intensive industries in the Canadian economy, as part of the broader three-part discussion on "The Societal Value of IP in the New Economy". Canada looks forward engaging on these issues during the current and upcoming TRIPS Council meetings in 2018. We would like to thank the co-sponsors for their communication on this topic, as well as the delegations that have provided insights so far.

335. In examining the relationship between IP-intensive industries and economic activity, one of the key questions facing policy makers is in identifying the influence that IP protection may have on economic output. While it is broadly understood that the outputs of innovation and creation – such as new products, technologies and processes – can drive commercial success (a point made in last year’s discussion on the topic of IP and micro, small and medium-sized enterprises), the exact role played by IP protection is not always linear. In other words, a patent does not always necessarily lead to a given ratio of economic activity. Nor for that matter, is innovative economic output necessarily accompanied by a given level of IP protection.

336. Nonetheless, we can identify the impact that specific IP-intensive industries have on economic activity, which in turn, can help inform policy decisions on how IP can support and facilitate the growth and contribution of these industries to overall economic activity. Along these lines, Canada has recently conducted a number of studies on the contribution of specific IP-intensive industries in the Canadian marketplace, with a view to further clarifying the relationship between IP and economic output.

337. For instance, in 2014, a study commissioned by the Canadian Department of Innovation, Science and Economic Development (ISED), entitled "Intellectual Property and the Canadian Economy: IP-Intensive Industries and their Economic Contribution", measured the level of employment, wages, and economic contribution of 75 IP-intensive industries to Canadian GDP and trade. The study drew upon a range of data sets, including patent and trademark filing data available through WIPO, as well as data from the Canadian Intellectual Property Office (CIPO) and Statistics Canada, to identify a set of patent and trademark-intensive industries across the Canadian economy. In terms of methodology, this involved linking the listing of industries in the North American Industry Classification System (NAICS) to the classes of trademarks used in the Madrid System as well as the Nice Classification System under WIPO, as well as to patent classes under WIPO’s International Patent Classification. Using patent grant and trademark registration data, the study then calculated patent and trademark intensity ratios (e.g. total number of patents granted and trademarks filed divided by the average payroll employment by industry) for a set of industries, to identify a subset of IP-intensive industries for each type of IP. Using the WIPO definition of "core" copyright industries (e.g. those industries that are "wholly engaged in creation, production and manufacturing, performance, broadcast, communication and exhibition, or distribution and sales of works and other protected subject matter"), the study also identified a subset of IP-intensive industries in this area.

338. Using this data, researchers were able to estimate that the 75 IP-intensive industries in the study accounted for 25 percent of Canadian GDP in 2010 ($332 million in Canadian dollars, or roughly $262 million in US dollars). These industries also contributed to 40% of Canada's total exports for 2010. In cross-referencing the set of IP-intensive industries with Statistics Canada data, the researchers were also able to identify the total Canadian employment in IP-intensive industries, which stood at 13.6% in 2010, with the majority of employment found in trademark-intensive industries, followed by copyright and patent-intensive industries. Researchers also found that weekly earnings in IP-intensive industries were 16% higher than the national average, with the highest weekly earnings found in patent-intensive industries.

339. Going a step further, CIPO has also more recently turned its investigation to the relationship between IP-intensity and economic performance at the firm level. For instance, CIPO's most recent "IP Canada Report" for 2017 examines the economic impact of industries designs on firm performance. Using financial data from the years 1990-2014 from 723 publicly-traded Canadian firms, of which 70 held at least one industrial design, CIPO’s study found a 16% increase in revenue per employee associated with holding industrial designs. More interestingly, the study found a 0.46% increase in revenue per employee from each additional industrial design registered to a firm.
340. Of course, one of the questions raised in examining IP-intensity and economic output is the role played by IP-protected assets. To get at a better understanding of this relationship, CIPO's study on industrial designs also investigated the impact of the "design orientation" of a firm, which aims to capture whether the industrial designs are directly responsible for higher performance, or whether this correlation is due to other activities associated with the industrial design. Using a new model to get at this question, CIPO found that a firm having ever held an industrial design resulted in a 13% increase in revenue per employee and a 17% increase in net income per employee, in addition to the marginal effect of each industrial design currently held by that firm. At the same time, the relationship between industrial design ownership and economic performance is not definitive. While the presence of industrial designs is associated with higher levels of firm performance, future research on data on associated variables, such as R&D spending, marketing expenses, and firm age, will be instructive in getting a clearer sense of this relationship.

341. Building on this research, CIPO has also begun investigations on emerging Canadian industries, with a view to using patent data to highlight areas of innovation. Two ongoing studies, in the areas of climate change mitigation technologies and space technologies, draw upon patent data to identify areas where Canada may have relative advantages in respect of certain technologies within each industry. Using keywords from patent documentation to cluster patents together, CIPO has developed "patent landscapes", which serve as visual representations of climate change mitigation technologies, as well as space technologies, in respect of patents applied for by Canadians. In clustering patents together in this way, patents are organized in common themes and grouped together as "contours" on each patent landscape map to show areas of high and low patenting activity by Canadians. In doing so, the patent landscapes provide insights into the areas of each industry where Canadian innovators are relatively specialized. For instance, when compared to other top patenting countries in the area of climate change mitigation technologies, patent landscape maps in this area indicate that Canada is relatively specialized in areas such as carbon capture, buildings, smart grids and traditional energy. Similarly, with respect to space technologies, the patent landscape in this area indicates that Canadian innovators are active in areas such as antenna technology, communications, and navigation satellite systems. This research, which is continuing in 2018 (and is detailed further in CIPO's most recent "IP Canada Reports" for 2016 and 2017) will provide further insights into the technology areas where Canadians are patenting, with a view to identifying some of the key innovations in these fields.

342. These are just some of the approaches that can help identify and measure the impact of IP-intensive industries on economic output. Canada would be pleased to provide additional information on any of these studies with other Members upon request, as well as updates on ongoing studies as this research continues. We would like to once again thank other Members for sharing their national experiences and information on the role of IP-intensive industries on the economy, and look forward to continued discussion under the theme of "The Societal Value of IP in the New Economy" today and in the coming months.

11.13 India

343. Please allow me to refer to my statement at the previous TRIPS council meeting in October 2017 under this agenda item and summarize that intellectual property is only one element in a larger innovation ecosystem and IP laws alone do not promote technology development. A national innovation survey conducted in India in 2011-12 in MSME sector identified: availability of finance and in general the cost of innovation, availability of skilled manpower, access to market information and availability of information technology, infrastructure, domination of established player in the market, regulatory requirements etc. as important barriers to innovation. Evidence does not support that increasing patent monopolies would drive greater innovation. On the contrary, the view gaining ground is that increasing patent monopolies would actually stifle innovation.

344. The history of evolution of IP rules in developed countries suggests that the design of IP rules and policies should be adaptable to the changing needs of societies. This is reflected by the fact that the levels of IP protection in developed countries increased as their industrial and technological capacities improved over time. While IPRs may provide an incentive to innovate, they are neither a necessary nor a sufficient condition and could only be effective in certain contexts. IPRs cannot boost innovation if the required conditions - skills, information, capital, market prospects - do not exist. Therefore, the strength of IP rules should be calibrated to
the levels of development in country. In countries where the required conditions to benefit from strong IP protection do not exist, IP protection may be more costly than beneficial.

11.14 Israel

345. Israel wants to thank for the introduction of this paper, since Israel is a strong believer and supporter of innovation and IP and the role it plays in economic and societal development.

346. Our country has many initiatives that support this innovation and IP agenda, some of which we have shared in this forum, as well as in others. We thank the Members who shared their experience and we will continue to listen carefully to the experiences of others. Israel looks forward to continuing sharing some of our experiences in future meetings.

11.15 South Africa

347. This delegation would like to thank the proponents for their communication titled "Intellectual Property and Innovative: Inclusive Innovation and MSME Growth". While there is no doubt that IP may be valuable and may contribute to economic development and growth, there are many factors that determine whether IP protection may create appropriate conditions that enable MSMEs to effectively exploit IP. MSMEs are a hot topic globally, but especially in South Africa, where the National Development Plan (NDP) stipulates that 11-million jobs need to be created by 2030 – 90% of these by SMEs.

348. From a definitional perspective, there is no common understanding of what constitutes MSMEs. There is no common global or regional definition in this respect. Generally, developed countries' definitions of MSME generally encompass much larger enterprises than developing countries' definition of MSMEs. In the European Union for example, any company with less than 250 employees is considered a MSME. In most African countries, a company with more than 100 employees is a large company. MSMEs are almost by definition registered enterprises. In other words, the informal sector is usually not covered. However, large parts of economic activity in developing countries occur in the informal sector. South African organisations are classified as 'small' when they have fewer than 50 employees and 'medium' when they have fewer than 200 employees.

349. IP rights are important, however MSMEs are affected by a whole host of factors that put them at a disadvantage with larger firms, especially in the developing world. Moreover, IP rights are only useful to businesses if they can use IP protection to generate innovation, this requires financial resources that MSMEs might not possess. In this way, IP may only serve the largest firms, unless complementary policies are in place. Furthermore, IP rights can only be realised if firms have access to critical ingredients for innovation such as finance, human capital, knowledge and infrastructure.

350. Strengthening and extending IPR regimes and enforcement are strongly advanced by countries at the cutting edge of innovation globally. One can understand that, for those countries, it is of strategic value to use IP protection as a mechanism to preserve the rent-generating and other advantages that arise from the technological capabilities built up by their firms.

351. In the history of development and 'catching up', successful strategies always appear to have involved 'emulation' that requires measures that are targeted at acquiring knowledge in increasing returns activities. Furthermore, all successful catching-up episodes occurred under condition of weak IPR regimes that permitted easier access to knowledge and acquisition and imitation. During the 19th Century, today's advanced economies used the IP system and the flexibility it accorded as they pursued their industrialisation objectives. This allowed those countries to strengthen their IP regimes at their own pace, and in support of overall progress in their economic development.

352. There are arguments that patents are unlikely to foster innovation in developing countries at early stages of industrialisation. The evidence on the extent to which patent protection, which is of particular relevance in the context of industrial policies, contributes to encouraging innovation is, at best, inconclusive.
South Africa has had a long history of IPR protection and, as signatories of the WTO, we have adopted and implemented all our obligations under the TRIPs Agreement. As we review our IP policy, we are seeking to ensure that appropriate balances are struck in providing protection for innovation and ensuring that benefits are shared in society. In particular, we are interested in ensuring that the IPR regime in South Africa supports our wider development objectives and underpins our efforts at industrial development objectives.