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# The App Economy in Colombia

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Progressive Policy Institute  
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## INTRODUCTION

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This report provides an update to our 2016 paper on Colombia's App Economy.<sup>1</sup> We find 87,900 App Economy jobs in Colombia, up from 83,100 two years ago. We compare Colombia's App Economy performance to other Latin American countries, estimate the relative size of the iOS and Android ecosystems, and give some examples of companies that are hiring App Economy workers.

The global App Economy started in 2007, when Apple introduced the first iPhone. Apple's opening of the App Store in 2008, followed by Android Market (now Google Play) and other app stores, created a way for iOS and Android developers to write mobile applications or "apps" that could run on smartphones anywhere. These apps became an essential part of daily life for most people, and an indispensable tool for business.

The rise of the App Economy has unleashed a virtual army of "app developers." These workers create, maintain, and support an ever-expanding range of apps. Mobile games are the most visible part of the App Economy, but not the most important. Mobile apps include such key uses as shopping applications, home banking programs, smart automobile interfaces, healthcare apps for monitoring patients, and sophisticated apps for running manufacturing plants.

Colombia has several features that make it an attractive destination for app development. First, the country benefits from economic and political stability compared to some of its Latin American peers. Colombia's economic growth is expected to accelerate to 2.8 percent in 2018.<sup>2</sup> Meanwhile, the Venezuelan economy is estimated to have contracted by 13.2 percent in 2017 as inflation skyrockets and the country's crisis continues, Argentina struggles with rampant inflation, and Brazil, with only 1 percent growth in 2017, faces a hotly contested presidential election and looming fiscal challenges.<sup>3</sup>

Second, the Colombian government has prioritized digitization in an effort to diversify its economy from natural resources, a trend that is likely to accelerate under President Iván Duque. Today the country boasts 62.2 million mobile phone subscriptions, 9 percent more than in 2015.<sup>4</sup> Colombia ranks 69th on the International Telecommunication Union's ICT Development skills sub-index, up 6 spots from 2016.<sup>5</sup> The skills sub-index seeks to capture capabilities

or skills which are important for ICT. As a result, companies like Accenture are starting technology centers in Colombia, hiring IT professionals with deep expertise in software development, data science, AI, and consulting.<sup>6</sup> Everis, a Madrid-based NTT Data company, has created a software development center in Popayan, training technicians in coding and software development skills.<sup>6</sup> In fact, a skilled IT labor shortage of 70,000 people is predicted by 2019.<sup>7</sup>

The extent of the App Economy workforce in a country reflects how quickly that country is embracing the next stage of the Information Revolution, which depends on mobile technology to digitize physical industries such as manufacturing and healthcare. However, official economics statistics do not provide an easy way to measure the size of the App Economy. In response, PPI developed a methodology based on a systematic analysis of online job postings.<sup>8,9</sup> In particular, we look for job postings that call for app-related skills such as knowledge of iOS or Android.

## RESULTS

Table 1 compares Colombia's App Economy with several other countries. The table presents two pieces of information. First, we estimate that Colombia has 87,900 App Economy jobs as of September 2018. This figure includes a

conservative estimate of spillover jobs. Second, we calculate the "app intensity," or the number of App Economy jobs as a share of total employment. Colombia has an app intensity of 0.36 percent.

TABLE 1: How Colombia's App Economy Compares Internationally

COUNTRY	THOUSANDS OF APP ECONOMY JOBS	APP INTENSITY*	DATE OF ESTIMATE
Colombia	88	0.36%	September 2018
Mexico	226	0.41%	March 2016
Brazil	312	0.35%	January 2017
Argentina	40	0.22%	February 2018

\*App intensity is the number of App Economy jobs divided by total employment | Data: Progressive Policy Institute, Indeed

Our methodology also allows us to estimate the relative share of mobile operating systems in Colombia's App Economy. We find that the iOS ecosystem includes 58,200 jobs, up from 53,300 jobs in our previous report. The Android

ecosystem includes 71,300 jobs, roughly the same level as our previous report. The two sum to more than the total because many App Economy jobs belong to both ecosystems.

TABLE 2: Colombia's App Economy by Mobile Operating System

	THOUSANDS OF APP ECONOMY JOBS, SEPTEMBER 2018
Total	87.9
iOS ecosystem	58.2
Android ecosystem	71.3

Data: Progressive Policy Institute, Indeed

iOS and Android jobs sum to more than total because many App Economy jobs are in both ecosystems

In terms of geography, we estimate that the Bogotá region accounts for 66 percent of the App Economy jobs in Colombia. Medellín accounts for another 18 percent, with the rest being distributed elsewhere around the country.

## EXAMPLES

Based on our analysis of the Colombian App Economy, we identified three trends:

**Colombian app developers of all sizes are hiring App Economy workers to create apps for themselves or for clients.** These companies provide the most potential for growth. As of September 2018, Logisticapp, a transportation app development company, was hiring iOS and Android developers in Bogotá. App developer AreaMovil SAS was searching for a developer with iOS and Android experience in Medellín. As of August 2018, software developer Human Team Technology QA SAS was looking for a senior mobile developer with Android and iOS experience in Bogotá. Technology management firm TeChrea was also seeking a senior mobile developer with Android and iOS experience in Bogotá. In September 2018, Periferia IT Group in Bogotá was advertising for an iOS developer to work with Rappi Colombia, a delivery startup that recently reached an estimated market value of over \$1 billion.

**Unsurprisingly, the Colombian tech sector is hiring.** As of September 2018, Aloti Software was hiring Android and iOS developers in Bogotá. Belatrix Software was looking for an iOS developer in Bogotá. As of August 2018, Certicamara SA, which specializes in digital

certification, was hiring an innovation analyst with experience in iOS and Android development in Bogotá. Tech company Valid was looking for an Android developer in Bogotá. Digital marketing firm Digital MDS was seeking a frontend developer with iOS and Android experience in Bogotá.

**Colombia's App Economy has spread to other industries as well.** As of August 2018, Fundación de Egresados de la Universidad Distrital was looking for an iOS developer in Bogotá. Fintech company Polymath Ventures was seeking an Android mobile developer in Bogotá.

## FUTURE

The administration of President Iván Duque is focused on the digital economy. Duque recently announced the creation of a High Presidential Advisor for Innovation and Digital Transformation to work with the Minister of ICT, and has pledged to streamline regulations and invigorate the digital economy.<sup>10</sup> The country is preparing to auction wireless spectrum and expand fast mobile broadband to rural areas. The regulatory agency recently eased restrictions on carrier sales offers to encourage 4G expansion in the country.<sup>11</sup> That alone could create new demand for apps.

The big issue is talent. Colombia needs to funnel more resources into the training of software developers, and app developers in particular. Combined with the relative proximity to the U.S., Colombia has a bright future as a center of app development.

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- 9 PPI has issued App Economy reports on United States, Japan, Vietnam, Indonesia, Korea, Thailand, Mexico, Brazil, Argentina, Chile, and most of the countries of the European Union, including the United Kingdom, Germany, and France. Most notably, we have not yet issued reports on China and India.
- 10 "President Duque Creates Innovation Council, Plans Tech Modernization Law in September," Finance Colombia, August 30, 2018  
<https://www.financecolombia.com/president-duque-is-pushing-to-simplify-regulation-for-technology-companies-in-colombia/>
- 11 Tariffs still discourage the import of higher end mobile devices and restrictions on the import of mobile phones may slow the adoption of smartphones in Colombia. See Michelle Di Iorio & Michael Mandel, "Tracking Colombia's App Economy," Progressive Policy Institute, October 2016. <https://www.progressivepolicy.org/wp-content/uploads/2016/10/Colombia-ENGLISH.pdf>.



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Founded in 1989, PPI started as the intellectual home of the New Democrats and earned a reputation as President Bill Clinton's "idea mill." Many of its mold-breaking ideas have been translated into public policy and law and have influenced international efforts to modernize progressive politics.

Today, PPI is developing fresh proposals for stimulating economic innovation and growth; equipping people with the skills and assets that social mobility in the knowledge economy requires; modernizing an overly bureaucratic and centralized public sector; and defending liberal democracy in a dangerous world.

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