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Three in Ten (29%) Are Confident They Will Hire Part or Full-Time Employees Within the Next Year

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Toronto, ON – Seven in ten (68%) small business owners in Canada plan to make some type of business investment within the next two years, according to a new poll by Ipsos Reid conducted on behalf of RBC. One-third (32%) of Canadians small business owners, however, say they don't plan on making any such investments in two years time. The top investment many small business owners see themselves investing in within the next two years is new equipment (35%), followed by new technology (29%) and new products and services (27%). The table below fully outlines what investments Canadian small business owners plan to make within the next two years:

Investment Type	%
New equipment	35%
New technology	29%
New products and services	27%
Hiring new employees	17%

Employee training	17%
New management processes	7%
New production processes	6%
Other	5%

Looking ahead to the next year, some small business owners believe that their business will be able to add new part-time or full-time employees. Three in ten (29%) small business owners are 'confident' (8% very/21% somewhat) that their business will add new staff in the next year. Seven in ten (71%) small business owners, however, are 'not confident' (46% not at all/26% not very) that they'll make such additions within the next year.

- Experienced business owners (37%) are more likely to say they are confident they'll hire more employees in the next year than those who are first-time business owners (25%)

When it comes to previously having invested in their business within the last two years, slightly more say they've invested in the last two years compared to those who've committed to investing in the next two years. Seven in ten (71%) small business owners say they've invested in their business in the previous two years, while three in ten (29%) say they made no such investments. New equipment (43%), technology (31%), and products and services (27%) were the top three investments over the past two years, falling in line with what many small business owners plan on investing in within the next two years. The only investment

increases from the past two years to the next two years are seen in human capital as hiring new employees (+5 pts.) and employee training (+2 pts.) are the only resources planned for increased investment. The following chart outlines in full how many small business owners invested in certain resources over the past two years compared with those who plan on investing in such resources in the future:

Investment Type	Past 2 years	Next 2 years	% Diff.
New equipment	43%	35%	-8 pts.
New technology	31%	29%	-2 pts.
New products and services	27%	27%	NC
Hiring new employees	12%	17%	+5 pts.
Employee training	15%	17%	+2 pts.
New management processes	6%	7%	+1 pt.
New production processes	4%	6%	-2 pts.
Other	6%	5%	-1 pt.

These are some of the findings of an Ipsos Reid poll conducted between August 9th to 20th, 2012, on behalf of RBC for their 2012 Small Business Survey. For this survey, a sample of 1,004 Canadians from Ipsos' Canadian online panel was interviewed online. Weighting was then employed to balance demographics to ensure that the sample's composition reflects that of the adult population according to Census data and to provide results intended to approximate the sample universe. In this case, the poll is accurate to +/- 3.5 percentage points of all Canadians the general population. All sample surveys and polls may be subject to other sources of error, including, but not limited to coverage error, and measurement error. For more information on credibility intervals, please visit the Ipsos website at http://ipsos-na.com/dl/pdf/research/public-affairs/IpsosPA_CredibilityIntervals.pdf

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How to Calculate Bayesian Credibility Intervals

The calculation of credibility intervals assumes that Y has a binomial distribution conditioned on the parameter θ\, i.e., Y|θ~Bin(n,θ), where n is the size of our sample. In this setting, Y counts the number of "yes", or "1", observed in the sample, so that the sample mean ($\bar{y}$) is a natural estimate of the true population proportion θ. This model is often called the likelihood function, and it is a standard concept in both the Bayesian and the Classical framework. The Bayesian[1] statistics combines both the prior distribution and the likelihood function to create a posterior distribution. The posterior distribution represents our opinion about which are the plausible values for θ adjusted after observing the sample data. In reality, the posterior distribution is one's knowledge base updated using the latest survey information. For the prior and likelihood functions specified here, the posterior distribution is also a beta distribution (π(θ/y)~β(y+a,n-y+b)), but with updated hyper-parameters.

Our credibility interval for θ is based on this posterior distribution. As mentioned above, these intervals represent our belief about which are the most plausible values for θ given our updated knowledge base. There are different ways to calculate these intervals based on $\pi\left(\frac{\theta}{y}\right)$. Since we want only one measure of precision for all variables in the survey, analogous to what is done within the Classical framework, we will compute the largest possible credibility interval for any observed sample. The worst case occurs when we assume that a=1 and b=1 and $y = n/2$. Using a simple approximation of the posterior by the normal distribution, the 95% credibility interval is given by, approximately:

$$y \mp \frac{1}{\sqrt{n}}$$

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[1] *Bayesian Data Analysis, Second Edition, Andrew Gelman, John B. Carlin, Hal S. Stern, Donald B. Rubin, Chapman & Hall/CRC | ISBN: 158488388X | 2003*

For this poll, the Bayesian Credibility Interval was adjusted using standard weighting design effect 1+L=1.3 to account for complex weighting[2]

Examples of credibility intervals for different base sizes are below.

Sample size	Credibility intervals
2,000	2.5
1,500	2.9
1,000	3.5
750	4.1
500	5.0
350	6.0
200	7.9
100	11.2

[2] *Kish, L. (1992). Weighting for unequal Pi . Journal of Official, Statistics, 8, 2, 183200.*